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AIRBORNE SELF-PROTECTION JAMMER PROGRAM

HEARING

BEFORE THE

SUBCOMMITTEE ON FEDERAL SERVICES,
POST OFFICE, AND CIVIL SERVICE

OF THE

COMMITTEE ON
GOVERNMENTAL AFFAIRS
UNITED STATES SENATE

ONE HUNDRED FIRST CONGRESS

SECOND SESSION

MAY 11, 1990

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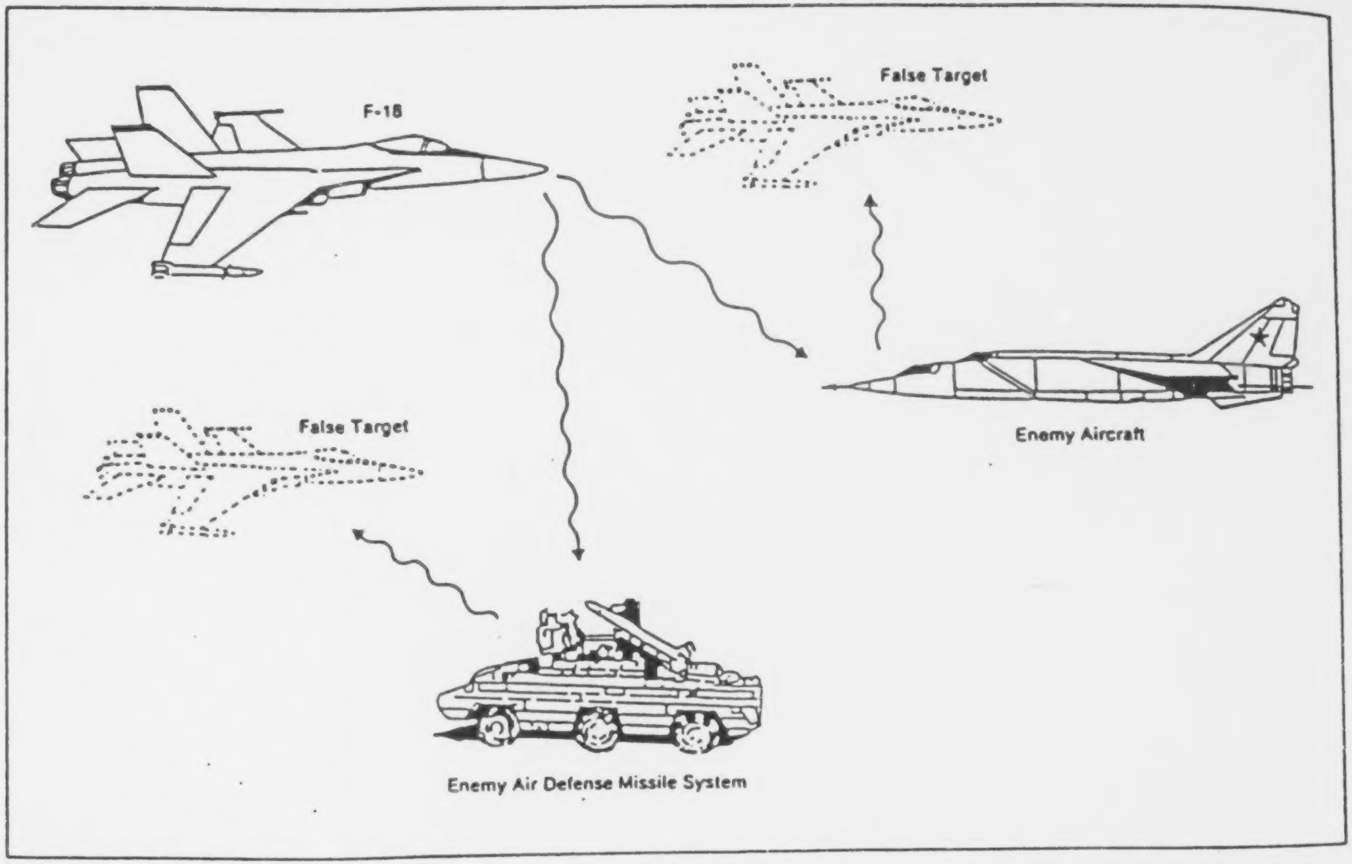
F-18
False Target
Enemy Aircraft
False Target
Enemy Air Defense Missile System

AIRBORNE SELF-PROTECTION JAMMER PROGRAM

FRIDAY, MAY 11, 1990

U.S. SENATE,
SUBCOMMITTEE ON FEDERAL SERVICES,
POST OFFICE, AND CIVIL SERVICE,
COMMITTEE ON GOVERNMENTAL AFFAIRS,
Washington, DC.

The Committee met, pursuant to notice, at 9:35 a.m., in room SD-342, Dirksen Senate Office Building, Hon. David Pryor, Chairman of the Subcommittee, presiding.

Present: Senators Pryor, Kohl, and Lieberman.

OPENING STATEMENT OF SENATOR PRYOR

Senator PRYOR. Ladies and gentlemen, our hearing will come to order. The Subcommittee on Federal Services of the Governmental Affairs Committee welcomes our very distinguished witnesses today. This hearing is about the Airborne Self-Protection Jammer, commonly known as the ASPJ. The boxes that we see before us today look very modest, but for each F-18 or F-16 they go into the American taxpayer will spend some $3 million, which is more than the price of an M1 tank. The entire ASPJ program will cost some $4 billion with only the Navy in this program and some $9 billion if the Air Force is included; $9 billion could buy the entire MX rail garrison program, 500 F-16 fighters, or 3,200 new tanks.

TOTAL COST OF ASPJ

R&D (1976-89) (millions)	$577.0
Production—FY89 (millions)	420.0
Production—FY90 (millions)	20.0
Production—FY91 request (millions)	173.4
Life-cycle costs—Navy only (billions)	3.7
Total life-cycle cost w/Air Force (billions)	9.0

Question: Why are we spending billions of dollars to produce a radar jammer that does not work, that is over budget and that is behind schedule when we are being forced to slash programs that have been proven effective? Today we will also review more complex issues regarding our weapons procurement system, the discipline of that bureaucracy, and allegations that the ASPJ test results were altered to make the ASPJ look better.

Let me establish this morning what this hearing is not about. It is not about whether we need radar jammers to protect our pilots. Clearly we do need new radar jammers, but we need jammers that work. We need radar jammers that do not endanger the lives of the pilots who fly those planes.

This ASPJ case makes one wonder what military leaders factors consider and why they even consider fielding faulty weapons. The Navy and the Air Force pilots who put their lives on the line for America deserve and need the best. They should not be undercut by the politics of the Pentagon bureaucracy or the clear ambitions of military leaders.

The ASPJ is more than a faulty radar jammer, it is an indictment of the system and the leaders that let it go into production. It reflects poorly on the Bush Administration, the Pentagon, the Congress, and ultimately the Nation.

The need for this hearing goes back about a year. At the time, test reports on ASPJ prototypes noted serious problems with the jammer's performance and reliability.[1] By last summer, the Pentagon was beginning to review the program to determine whether to permit ASPJ production.

At about the same time Secretary Cheney proudly released his "Defense Management Review." In it, he firmly stated that all weapons must meet strict performance and cost criteria. In other words, weapons must work as advertised before production actually begins.

On July 13th, then Under Secretary of Defense for Acquisition, Michael Stone, told his colleagues on the powerful Defense Acquisition Board, better known as the DAB, "Based upon my review of the alternatives for ASPJ, I believe terminating ASPJ must be seriously considered due to the issues of operational effectiveness, demonstrated reliability, and affordability." [2]

On July 25, 1989, Mr. Stone wrote his superior, Deputy Secretary Atwood. He said, "There is clearly no doubt that the ASPJ has not satisfactorily met the criteria for the authorization to proceed to production." [3] In effect, Mr. Stone was saying the ASPJ was a test case of Secretary Cheney's "Fly Before You Buy" procurement policy.

He also wrote that program costs were underestimated by at least $1 billion, and then he said, "The services all vote in favor of production. Most of the Office of the Secretary of Defense staff votes to terminate. My disposition is to terminate * * *"

On July 31, Deputy Secretary Atwood wrote back to Stone. He said that the ASPJ "has not satisfactorily passed the tests relative to cost, performance and reliability. This is a clear case of not meeting the exit criteria for a transition from the full scale development phase to the production phase." [3] At this time, Mr. Atwood was agreeing that the ASPJ has not passed its tests.

Secretary Atwood concluded, "It appears mandatory that one of two actions be taken: (1) Cancel the program, or (2) Discontinue all production efforts and relegate the program to an effective test and evaluation activity."

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[1] See p. 88.

[2] See p. 89.

[3] See p. 93.

He considered ASPJ production, but noted, "It is difficult to see how this is realistic, given that the system has been in development for 13 years and as yet has not proven out."

Last summer DOD's Acquisition Chief Stone wanted to kill the ASPJ program. Deputy Secretary Atwood wanted to kill ASPJ, and many of Secretary Cheney's staff wanted to kill ASPJ.

Yet, in August, something odd happened and that is what this hearing is about. These same men not only approved saving the ASPJ, they also voted to spend an additional $420 million to start production for an additional 100 ASPJs.

What magic occurred in those weeks? Who or what got these honest and good men to change their minds? What made them trade their convictions on a $9 billion gamble? I hope we will find those answers this morning.

We are now up to September 1989. The Defense Inspector General started an ASPJ investigation based on "Fraud Hotline" calls. This Subcommittee also started an investigation. We found bad decisionmaking, but more shockingly, we heard allegations that high-level military officials had been involved in "whitewashing" or influencing ASPJ test information presented to the Pentagon decision makers to make the ASPJ look good.

In effect, a $9 billion program may have gone into production based upon falsehoods. Due to the seriousness of my initial findings, I asked the General Accounting Office to investigate. Later all investigations were folded into one with the Defense Department Inspector General taking the lead.

In September, the Senate debated the future of the ASPJ and the Congress decided to block future production funds until further ASPJ testing proved the system worthwhile.

Last December, I sent a letter to Secretary Cheney about Deputy Secretary Atwood's ASPJ memo. Several days later Secretary Cheney approved a memorandum that canceled the entire program. Let me say again, Secretary of Defense Cheney killed the ASPJ program. Four days later Deputy Secretary Atwood signed papers that brought the ASPJ back to life.

The ASPJ is a cat with nine lives. Secretary Cheney says cancel the program, but then Deputy Secretary Atwood, a man who suggested canceling the program 5 months earlier says now that it should be continued.

Now, if this is not crazy enough, at roughly the same time that Mr. Atwood canceled Mr. Cheney's cancellation, the United States Air Force canceled its 60 percent participation in the program. In January 1990, Secretary Cheney proudly put the Air Force part of the ASPJ program on the list of terminated programs he presented to the Congress. This left the Navy all alone with rising unit costs and an ASPJ that does not work.

This could be comical if billions of dollars and national security were not at issue. As it stands, this is deadly serious.

It is all the more serious because the President is now coming forward asking the Congress for an additional $173 million for even more ASPJs that have failed the tests, have gone over budget and is behind production. The Pentagon currently plans to decide on future production next fall, even though adequate testing on the new production version ASPJs will not be completed until 1992. In other words, the old Pentagon mentality, "Buy Now and Test Later" is still pervasive.[1]

The Inspector General's report is a welcome sign of sanity in this ASPJ horror story. It is some of the finest work I have seen from any Inspector General. It documents bad management, incredibly poor oversight, and confirms our worst fears about Pentagon leaders being fed misleading test information.[2]

I truly welcome our witnesses here today. The Inspector General has an excellent but I must say a most disturbing, report to discuss, and the Navy and Air Force have some explaining to do. I am very happy to have Secretary Atwood here. He will be our first witness. I know him as a man of integrity and honesty, but today I want to know what went wrong, why he changed his decision, and why he has signed off on producing a system that will endanger our pilots, that does not work, and in my opinion, is one of the great misfortunes in all Pentagon history.

We have two of our colleagues here this morning. Senator Kohl of Wisconsin, we welcome your attendance, and your remarks.

OPENING STATEMENT OF SENATOR KOHL

Senator KOHL. Thank you, Mr. Chairman. I don't believe you need much help this morning, Mr. Chairman, but I wanted to stop by for a moment to lend some moral support to you in this fight. What you are doing here today is precisely what Congress needs to do much more often. Namely, to look into the claims we make about how well we are spending taxpayers' dollars. If we did that more often, we would find what you already know; the claims are extravagant, the spending is wasteful, and the products we are buying often are not worth the costs.

The story of the way we decided to go ahead with the ASPJ ought to be a piece of creative fiction, but sadly it is not. It is a real life horror story, and you are to be congratulated to have the courage to read that story and to try and stop it before the last chapter is written.

Some may see this hearing as another exercise in picking on the Pentagon. Of course, it is not. It is an effort to learn something about the way Government makes decisions, and it is an effort to stop us all from making bad decisions in the future.

I would like to stay for the entire hearing, but I have some appointments I need to keep back in my office. I just wanted you to know, Mr. Chairman, that I appreciate the effort you have put into this, and I look forward to working with you in your ongoing effort to bring more sense and more intelligence to the procurement practices of our Government.

Thank you, Mr. Chairman.

Senator PRYOR. Senator Kohl, thank you very much.

Senator Lieberman.

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[1] See p. 94.

[2] See p. 88.

OPENING STATEMENT OF SENATOR LIEBERMAN

Senator **Lieberman**. Thank you, Mr. Chairman, and I join with Senator Kohl in congratulating you on your leadership in this matter, and I appreciate the opportunity to be here to express that support. Mr. Chairman, if I may digress from the norm a bit, as I listened to you and Senator Kohl an unusual story came to mind, and giving credit where it is due, I first heard former President Reagan tell it.

It may seem off, but if you will allow me the luxury, it is a story about one of the inspectors from the Supreme Soviet being sent out to a collective farm to see how things were going in the Soviet Union. This story obviously did not take place today, it took place 5 or 10 years ago. He meets the first farmer that he sees along a dirt road at the farm and asked him how things are on the farm, and the farmer says things are magnificent. And he asked him, how is production, how is the growth of the crop, and the farmer says magnificent. The inspector is getting a little bit impatient and he says, well, let me be more specific, how has the potato crop been this year? And the farmer says, the potato crop has been just outstanding. As a matter of fact, if we took all the potatoes that were grown on this farm this year and put them one on the top of the other they would reach up to the feet of God. And the inspector stepped back and said, comrade, what are you talking about, this is a Russian communist collective farm, there is no God. And the farmer says, that's okay, there are no potatoes either. [Laughter.]

And I had the feeling here, as I read the documents that were prepared, the outstanding IG report, and I heard your excellent and incisive statement, that there are no potatoes here either when it comes to the ASPJ jammer, but the program just keeps going on. And I hope that we, through this Committee, can play a role in stopping it.

We are at, to say the least, a new turn in our relations with the Soviet Union and therefore in our own military history. I know that there were times in the past when we felt ourselves in an intense arms race with the Soviets. Sometimes we were compelled to buy before we flew to get competitive armament systems out there to try to match the Soviets' quantitative advantage. But we fortunately seem to be turning the corner away from that time. We clearly are at a point, as Senator Nunn has said so often, where we have to fly before we buy because of the cuts in the United States defense budget.

It is all the more reason why the story that is going to unfold today is so troubling. And I must say I feel troubled by it personally, as I know you and other Members of the Senate will be, in the sense that I am from Connecticut and the defense cutbacks are already hanging like a cloud over the heads of some very important programs in our State. Proposals to cut the M1 tank, whose engine is built in Stratford, Connecticut, could mean the lost of 1,500 jobs. There already has been an order to the United Nuclear Corporation in Montville, Connecticut, which has been using UNC as a second source supplier for nuclear fuel, to shut down within 2 years. We are going to lose 900 jobs there.

With that reality staring us in the face, it is really infuriating to see a defense program that has been untested, rejected, then revived, still consuming so many of our dollars.

Beyond the economics, I just want to come back finally to one other point, which is that clearly there is a military reason and a human safety reason why we are troubled about this program. Aerial combat, like so many other forms of combat today, are becoming increasingly electronic. Today pilots are killed by missiles that they cannot see, and the truth is that even the most able pilot is no better today than his electronic equipment. I think in that sense the last thing that we want to do is to have a faulty jammer that will give a pilot what amounts to a false sense of security.

And in that sense we are not only talking about economics when we talk about the ASPJ jammer, we are talking really about questions of life and death. Repeated failure of this system on performance tests leading to a conclusion in the spring of 1989 where Navy testers say that the ASPJ had attained only marginal operational suitability, some strong negative judgments by the Air Force, all of that says to me that this is not only a waste of money but it is a system that could endanger our fighting forces, and, obviously, we don't want to do that.

So I look forward to the hearing. I congratulate you again on your leadership, and I thank you for this opportunity to make that statement.

Senator PRYOR. Thank you very much, Senator Lieberman.

Senator Roth of Delaware, a distinguished member of this Committee, the former Chairman of the Governmental Affairs Committee, could not be with us this morning. I do have a statement that will be placed at this point in the record.

[The opening statement of Senator Roth follows:]

OPENING STATEMENT OF SENATOR ROTH

I congratulate Chairman Pryor for scheduling this hearing.

I think that the issues that will be raised today go to the heart of concerns that the Senator from Arkansas and I have shared with respect to "fly before you buy" and which led us to propose creation of an independent director of operational test and evaluation in the Department of Defense.

That legislation clearly stated that it was the intent of the Congress that weapons systems be subjected to robust operational tests before production began so that we would field effective and suitable systems. Because some did not clearly understand our intent, we amended the operational test and evaluation requirement to limit low rate initial production to the minimum quantity necessary to complete operational testing. I truly believe that we have spoken as clearly as we can.

The project discussed here today suggests that there are still some in the Pentagon who are not listening closely.

BACKGROUND

The system which raises the issues and concerns I just mentioned is called the Airborne Self-Protection Jammer or ASPJ. The Department of Defense has spent heavily both time and money on this sophisticated electronic equipment to protect its aircraft and pilots on future battlefields. The jammers, which will cost up to $3.5 million per plane, are supposed to identify enemy radar, determine which ones are most threatening to the aircraft and then transmit electronic signals to deceive or interfere with ("jam") the radars of the hostile air defense weapons. The Pentagon has built many of its combat tactics around the black boxes which jam or deceive enemy radar guided antiaircraft missiles, increasing chances of survival.

This program was begun in March 1976; full scale development began in 1981; low-rate-initial production (LRIP) of Lot I (100 units) was approved in August of

1989. The Pentagon is now seeking authority to proceed to production of Lots II and III under LRIP. This electronic defensive system which was intended to be carried aboard more than 2,000 fighter and attack aircraft including virtually every major warplane, from the Navy's F-14 Tomcat fighter to the Air Force's F-16 and the Marine Corps AV-8B Harriers, has serious technical flaws that threaten the Pentagon's ability to rely on them as planned.

.The Director of Operational Test and Evaluation, in his annual report, states that after 13 years of development, the latest flight tests showed the system was "marginally operationally effective and marginally operationally suitable." This system is years behind schedule, millions of dollars over budget and unable even to meet reliability and operational criteria established by the Department. The ASPJ represents a small advance over existing and less costly systems and the cost trend for the ASPJ is upward. Initially, the ASPJ was a joint Air Force/Navy program. The Administration's budget announced termination of Air Force participation and a savings of $1.2 billion. What is left is a current life cycle costs of about $3.7 billion but the quantity has been reduced from about 2,000 units to some 700 units.

The Defense Department has vacillated between terminating the program and keeping it going. For example, Secretary Cheney signed a budget decision document on December 11, 1989, which many believed to be a death warrant for the ASPJ program. Despite the problems with the testing models, the Pentagon, last fall, awarded $419 million in contracts to Westinghouse Corp. and ITT Avionics Division, which have developed the system, to build the first 100 production models to be installed in aircraft. Now, Navy is asking for release of production funds for Lot II and Lot III.

CONCLUSION

I believe that the Navy request is in direct opposition to the legislation which created the independent Director of Operational Test and Evaluation. With the system now at least four years behind schedule, tests have revealed that the ASPJ has problems detecting, identifying or jamming some enemy radars that have been in existence for the past two decades. Moreover, it may not meet many of the threats intelligence officials project for the coming decade when it is to be installed on new models of the F-18, F-16, and F-14 fighters, the A-6E attack plane and the AV-8B Harrier.

I agree fully with the Director of Operational Test and Evaluation. We should not commit to Lots II and III until ASPJ has demonstrated that it is effective and suitable.

Senator PRYOR. We would like our first witness, Secretary Donald J. Atwood, to come to the witness table.

Secretary Atwood, I know that you have a long and distinguished career. You ran the General Motors Corporation. It is my understanding that you did a good job and now you are at the Pentagon trying to make sense out of military procurement. We want to thank you for your public service, and for appearing with us today.

Secretary Atwood, if there was ever a layman in this area it is me. I do not understand all the acronyms, I do not understand the boards, the chains of commands and I want you to bear with me through this hearing this morning. I may ask you at the end of your statement some very basic questions. I am responsible to the taxpayers. This Subcommittee is charged with oversight of Federal services, and that is why this Subcommittee is meeting today.

Once again, we are very proud that you have come. We look forward to your statement, and then there will be a series of questions.

TESTIMONY OF HON. DONALD J. ATWOOD, JR., DEPUTY SECRETARY OF DEFENSE, DEPARTMENT OF DEFENSE

Mr. ATWOOD. Thank you, Mr. Chairman. I am pleased to be here and pleased to have the opportunity to at least explain the actions that have been taken, to discuss some of the philosophy behind what we are trying to do at the Pentagon and hopefully answer any of your questions.

I have a prepared statement which we will submit for the record,[1] but I might just informally discuss with you for a moment the challenge that I felt in coming to the Pentagon, which was just over a year ago, and some of the actions that we are taking.

Probably the most severe problem that we faced and had to move head-on into was the perception—and a real perception—that many of the major weapons programs within the Pentagon were either late or overrun, technically deficient, or some combination of the above. There are a number of reasons for that, but the corrective actions we have taken are very simple. Number one, we undertook to, in effect, streamline the organization and to take out layers of unnecessary management to permit the program managers of these programs to devote the vast majority of his or her time to running the program.

Until now, very honestly, they were spending a vast majority of their time—the program managers now—as advocates for the program, briefing the many, many people above and around them as to what was going on, and spending only a fraction of their time managing the program. This, I think, had a very detrimental effect on the performance of our programs. We have streamlined it and have tightened the chain of command, and the program managers are now spending the majority of their time running the programs.

The second very serious problem that happens is one of continuity of funding. It is very difficult, as you know from your own experience, to have any industrial organization, whether they are engaged in commercial practices or products or whether they are engaged in the defense business, to make long-term investments which would improve quality and reduce costs if in fact all they are guaranteed is one year's worth of business, or even a fraction of a year's worth of business. We feel that there has to be continuity in these programs or, in fact, these companies are not going to make the kind of investments because there will be no return for them.

So we are providing continuity as we can. We have asked Congress also to help us in providing at least 2-year funding as opposed to 1-year funding, and I think that will also help.

The third, and probably the most critical element, is the one that you are largely addressing today, and that is that on each of these weapons systems programs we go through a series of phases, starting off with the concept phase, then the demonstration and validation phase, then a full-scale development phase, and then on into production phase. Before we move from one phase to the other, there are present criteria that must be met. Unfortunately, all too often in the past we have had cases where programs did not meet the criteria, and then for one reason or another moved into the next phase which then spells a major retrofit, a major program change later on.

For example, if a program does not pass the exit criteria before moving from demonstration and validation into full-scale development, surely it means you are going to try to correct all the problems that should have been corrected before you moved into it. Similarly, before you go into any large scale production, if it did not pass the operational tests, then indeed the production phase would be faced with a retrofit program as you try to correct the problems after the fact. And so one of the things that we have attempted to do is to instill discipline into the meeting of these exit criteria before we move on from one phase to another.

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[1] See p. 47.

Now, the ASPJ program is a case that came up last August, was the subject of much discussion, much review, much analysis, and the decisions were made to proceed. I think rather than for me to try to go through this series of events I would rather leave it to questions and maybe it will all come out. I would be happy to do it either way, but let me just stop here.

Senator PRYOR. Mr. Secretary, we appreciate that attitude. Thank you very much.

We have invited Senator Grassley of Iowa to join us this morning. Even though he is not a member of this Committee, he has been a diligent warrior out in the field, trying to make military expenditures hit the target. We are pleased that he has joined us this morning.

I will ask Senator Grassley if he has an opening statement, and then we will proceed with questions.

TESTIMONY OF HON. CHARLES E. GRASSLEY, U.S. SENATOR FROM THE STATE OF IOWA

Senator GRASSLEY. Yes, I do have, Mr. Chairman. As you can probably tell, in the last 2 or 3 days I have been a bit under the weather, so I am not my feisty usual self on this matter. I'm sure Mr. Atwood will not care at all in regard to that.

I would like to start by commending you, Mr. Chairman, for the excellent background and preparation that went into this hearing. The work that you have done on this issue places an enormous burden of proof, in my view, upon those who want the ASPJ to go forward without further testing. This is a system that typifies those programs experiencing major costs, schedule, and performance problems throughout the 1980s that occurred because of poor management by the Defense Department. The only difference between then and now is that now we supposedly have a restructured decision-making framework that is supposed to prevent these kinds of troubled programs from being produced.

In my view, Mr. Chairman, not only is this a hearing about the performance of this system, it is also about the performance of DOD's management reform effort. In the ideal world we wouldn't be holding this hearing today. In the ideal world this program would have been managed properly and the system would be successful.

But the reality is, and has been, as we have seen throughout the 1980s, that overpriced faulty weapons systems frequently find their way through the defense acquisition system. A little gaming by the service and a little porking by us in Congress is usually all it takes to perpetuate a troubled weapons system, and, of course, it needs to stop. I am sure that there isn't one person in this room today who would disagree with that.

Mr. Atwood and I have spent numerous hours over the past few months discussing management problems and DOD. We talked about bureaucratic gaming of the reforms he is trying to implement. In March I issued a report which I have here in my hand.[1] I have a copy for you too, Mr. Chairman. It is opened to a page I am going to make a reference to.

In March I issued this report, and I believe what you are looking at is a score card of the status and progress of Secretary Cheney's Defense Management Review. Until now this report has been viewed in the abstract as a dry, comprehensive approach toward solving defense management problems. I pull it out today, Mr. Chairman, to show these problems are not just in the abstract and to show how the problems associated with the ASPJ fit into the overall management framework. On page 19—and I will not go into quoting from it, but I would like to have you sometime read what I have underlined there on page 19—of Secretary Cheney's DMR, if you read that, Mr. Chairman, DOD's reforms call for rigorous and disciplined performance reviews before moving into production.

Now let's look at this page that I call my score card. There is a table that shows the progress to date of DOD's reforms. The left-hand column shows the promised reforms, and the other 3 columns show whether or not each of the services has implemented them yet.

In the left-hand column you will see down near the bottom a reform called "Revision to DAB Milestone Reviews," and it references page 19 of the DMR, the one that I referred to. As you can see, the boxes under the column marked "Army, Navy and Air Force" are blank. That means that the services, which is the point of execution of our weapons programs, have not yet implemented this reform. They have not yet restructured in a way that will deal with costs, schedule, and performance problems before they go to the DAB.

And that, Mr. Chairman, is why the ASPJ has gotten along as far as it has despite its problems. In this case, the Navy has no mechanism and no incentives to stop an ASPJ from moving through the system. That means that the Office of the Secretary of Defense is going to have to make the tough decisions on this program.

So in my view, Mr. Chairman, this hearing is a test case for the Defense Management Review and for this administration. Do we test before we buy as we say we want to do and as it is intended in the DMR, or do we allow the bureaucrats to game the system?

As I said, I have spent numerous hours with Mr. Atwood and others in this administration discussing these problems, and I believe he and others in DOD will make the right decision and ensure this system works before we decide to buy it. It is a difficult decision to make because there is an entrenched bureaucracy with a vested interest in pushing this program through.

The fact that you are holding this hearing before the public will tremendously help DOD make the right decision. The issue becomes, then, who is going to win, the people or the bureaucracy pushing the program. Thank you.

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[1] See p. 96 for excerpts from the report.

Senator PRYOR. Senator Grassley, thank you. Once again, I would like to say that we have been associated on many, many causes together in the past. We came to the Senate together. This was before Senator Lieberman graced us with his presence and membership in the Senate.

Senator Lieberman, one of the early issues that Senator Grassley and I took on was to try to create an independent testing office for operational testing under combat conditions. I think this was probably about in the year 1982 or thereabouts, and we offered an amendment to the Armed Services Authorization bill. If I am not mistaken, our attempt to create an independent tester, rather than having the contractors continuing doing the testing, got 8 votes out of 100.

During that period the President opposed our efforts, the Secretary of Defense opposed us, and some of the leadership in the armed services community strongly opposed us. Ultimately the office of Operational Test and Evaluation was created.

After the office was created, there was no director for some 18 months. This showed me that there was not a commitment or a willingness on the part of the administration or of the Pentagon to make independent operational testing a true priority.

The nominee, it turned out, came from the industry. Even though he was a good man, I opposed his nomination. I lost. I went to his swearing in ceremony. I was the only Senator there. I did it because I wanted to try to send a message that I supported him in his role.

From the Operational Test Office regarding the ASPJ, Mr. Secretary, we hear some very disturbing reports that the system has flunked major tests.

Now, if you were back in charge at General Motors and you were producing a car that flunked performance and reliability tests, overshot cost targets, was unsafe for the individuals to drive it, would you have put the car out on the market?

Mr. ATWOOD. No, sir.

Senator PRYOR. Do you think that the pilots that fly for us and defend our freedom would like to be in a plane with this contraption with them? Do you think they would like to be in that plane doubting that the system worked?

Mr. ATWOOD. Absolutely not.

Senator PRYOR. I would like to clarify one thing. Last summer you seemed to think killing the ASPJ was a good idea because it had not met its test results. Secretary Atwood, we have your memorandum there before you.[1]

Do you recall writing this memo?

Mr. ATWOOD. Yes, I do.

Senator PRYOR. You would also recall then that Secretary Cheney killed the program a few months after this.

Mr. ATWOOD. I killed it. I killed the program.

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[1] See p. 93.

Senator PRYOR. You killed the program. Then why did you, I hate to use the word flip-flop, ultimately change your position and override the Secretary of Defense and bring this program back to life?

Mr. ATWOOD. The Secretary and I brought it back to life. Number one, could I go back just a little bit?

Senator PRYOR. Yes.

Mr. ATWOOD. I wrote that memo, but that is only part of the memo. I would like to quote the remainder of the memo, if I may. The remainder of the memo, which comes after Item 2; Item 1 is cancel the program, Item 2 says, "Discontinue all production efforts and relegate the program to an effective test and evaluation activity." The next paragraph says,

> There is one alternative to the above which could be considered. This is based on the fact that the services feel that the system is essential and that it will ultimately meet the performance and reliability targets. If this is the case and can be demonstrated within a reasonable period, i.e., a year, then in order to maintain program continuity it might be acceptable to proceed with a very limited production phase while test and evaluation is conducted.

Senator PRYOR. Is 120 ASPJ jammers limited production?

Mr. ATWOOD. Yes, over the period of time that it takes to do it, which is well over 2 years.

Senator PRYOR. How many ASPJ jammers do you need for a proper test?

Mr. ATWOOD. It takes fewer than that to do a proper test, but continuity is based on four per month.

Senator PRYOR. Pardon?

Mr. ATWOOD. Continuity of the program is based on four deliveries per month.

Senator PRYOR. Four of these units per month?

Mr. ATWOOD. Correct.

Senator PRYOR. And each unit costing approximately $3 million?

Mr. ATWOOD. That's correct.

Senator PRYOR. Now, the alternative which you mention in your memorandum of July 31st was this discussed at the Defense Acquisition Board level?

Mr. ATWOOD. I addressed this memo to Mr. Stone, who at that time was Chairman of the Defense Acquisition Board. I understand that he went back and discussed that with all of the members of the Board, and it was their decision to go ahead and take the alternative approach, to proceed with a limited production until the test and evaluation was completed.

Senator PRYOR. For 13 years we have been researching and developing this system. What was going to change in the next year that had not taken place in the previous 13 years?

Mr. ATWOOD. They were going to incorporate the changes which had already been designed into the system but had not been incorporated into the system prior to the test. In other words, they had capped the research and development activities and had not incorporated in it many of the changes which made the fixes that would have corrected the system as they had tested it. Therefore, the request by the Navy to me was two-fold. Number one, they requested that we not destroy the basis in industry for producing this, the same industry which had been in the program, and they asked for a limited production during the period in which they would incorporate these changes into the system—they already knew about them—and would be conducting the operational tests. Those operational tests would constitute a go-no-go phase before any large scale production could be started.

Senator PRYOR. Let me see if I might——

Mr. ATWOOD. Could I correct one thing?

Senator PRYOR. Yes, sir. I am just trying to find facts here. I truly am.

Mr. ATWOOD. I am sure you are, and I hope you understand I appreciate your attitude in it and I am only trying to give you the facts as I see them.

You mentioned that Secretary Cheney killed the program and that I later resurrected it. This is a process that we go through at the time of the budget, and we issue program decisions based upon a quick look at what comes out of the services. I originally killed the program based on the fact that the Air Force recommended it be killed. Secretary Cheney then approves it.

Secondly, when the Navy appealed—I am speaking now of December—the Navy appealed and said, look, nothing has changed, they are incorporating these fixes into the system, that they should be allowed to go ahead and conduct the tests. I said all right as far as the Navy is concerned, then Secretary Cheney approved that, and that was in our budget.

Senator PRYOR. It is difficult to see how this is realistic, given that the system has been in development for 13 years and has yet not proven out. Secretary Atwood, let me read the last paragraph of your memo.

> If, in spite of this, you decide to go ahead with a very limited production, then it must be mandatory that full demonstration of the performance and reliability be demonstrated within one year. If it is not, then the program must be canceled.

Mr. ATWOOD. That's correct. That is on the chart.

Senator PRYOR. Yes, sir. That was dated July 31.

Mr. ATWOOD. That's correct.

Senator PRYOR. We are just 2 or 3 months away from July 31, 1990, the end of the 1 year that you have given the services to make this thing work. What is the status now?

Mr. ATWOOD. The status of it today is that they will be undertaking the tests very shortly. I understand that the tests will not be completed until shortly after the first of the year.

Senator PRYOR. After we have committed $420 million.

Mr. ATWOOD. We have already committed that. We have not received any deliveries.

Senator PRYOR. According to the Inspector General's report, $668 million is now under contract for these jammers, is that correct?

Mr. ATWOOD. Yes. I believe a significant amount of that has been spent during the development phase.

Senator PRYOR. We have contracted for those, the taxpayers, and the Government is obligated to pay for those, even though they did not pass the exit criteria and have not passed the test results, is this correct?

Mr. ATWOOD. No. I believe you will find that the test which they are undergoing are ground tests, and they are pass/fail tests. If those tests are not completed satisfactorily, then it is up to the Defense Acquisition Board to rethink its position and either cancel the program or whatever disposition they see of it. But there are to date no deliveries on that limited production. Deliveries do not start until significantly after that period, and therefore if they cancel the program, they will have canceled it before any deliveries.

Senator PRYOR. All right. Who is doing the testing? There will be no operational tests until 1992. That is 2 years away.

Mr. ATWOOD. That's right. That is the operational tests.

Senator PRYOR. Who is doing that?

Mr. ATWOOD. That will be done by Dr. Duncan's shop.

Senator PRYOR. What test results did you rely on when you changed your position on this ASPJ jammer?

Mr. ATWOOD. What tests did I allow?

Senator PRYOR. What tests and what criteria did you rely upon when you decided to approve this $420 million.

Mr. ATWOOD. I looked at the test results that had been accomplished on the systems as they existed at that time, systems that existed without the design fixes put in them. Tests which were entirely unsatisfactory. I recognized they were unsatisfactory. I reviewed them. I reviewed also the fact that they knew design changes that were to be incorporated in it, and it was based on the assumption on my part that they would be incorporated and that the systems that would be tested finally would be the upgraded systems with these fixes in them.

Senator PRYOR. Mr. Secretary, you have talked about Mr. Duncan. He is going to be a witness very shortly. I think, by the way, he is doing a very good job. I want to ask him why he changed his mind also. This is your own director of the Operational Test and Evaluation.

Dr. Duncan says that due to cost, performance and reliability problems, no further ASPJ production funds should be released until tests are completed in 1992.

How do you square with this?

Mr. ATWOOD. Well, that is Dr. Duncan's and I think you should ask him, not me. It was Dr. Duncan you are quoting?

Senator PRYOR. That is correct.

Mr. ATWOOD. And I assume you are going to ask him that.

Senator PRYOR. I am going to ask him that. But now, he works for you, doesn't he?

Mr. ATWOOD. Oh, yes.

Senator PRYOR. He is your chief tester.

Mr. ATWOOD. That is correct.

Senator PRYOR. He said don't release any of these funds until this system works.

Mr. ATWOOD. Originally he did.

Senator PRYOR. What made him change?

Mr. ATWOOD. That I do not know. I assume he had the same information that I did and that he came to that conclusion.

Senator PRYOR. Were you aware that we received allegations that somewhere down the chain of command there was pressure exerted on the testers to make the results look more favorable? Were you aware of that, Mr. Secretary?

Mr. Atwood. No, sir.

Senator Pryor. Was anyone in the chain of command aware of this?

Mr. Atwood. I can only vouch for myself. I was not aware of it, and, therefore, I am sure Secretary Cheney was not aware of it either.

Senator Pryor. Mr. Secretary, why is the Air Force pulling out of the ASPJ program and the Navy continuing it?

Mr. Atwood. Number one, because of the vast cost pressure which the Air Force is under, they felt when they put together their budget for 1991 that it was essential that they cut major programs. There were 20 some odd programs cut, and the Air Force asked for and we gave them permission to cut out the ASPJ in that year.

Now, they happen to have a back-up. It is not as satisfactory as the back-up which would come if the ASPJ works out satisfactorily. But with that back-up and with the terrific pressures that they have fiscally, they recommended that they be allowed to drop out.

Senator Pryor. Mr. Secretary, it is my understanding the Air Force is going forward with development of the ASPJ, except they now have their program classified. So I am at an unfair advantage; I can't ask you how much this other system will cost. It will cost no less than this program, I assume. Is that correct?

Mr. Atwood. I would like to talk to you privately on that. That is not something we probably should discuss here, but it happens to be a Navy program, I might add.

Senator Pryor. You mean the Air Force is going to adopt the Navy's program?

Mr. Atwood. The Air Force will adopt the ASPJ if in fact it works as we advertise. If it works within the cost dollars that we are projecting, then will they rethink it. But right now they are talking about, number one, an Air Force system which is not as satisfactory as this, and number 2, you are correct, there is a back-up classified program.

Senator Pryor. Well, once again, I——

Mr. Atwood. And I don't mean to put you at a disadvantage on the classified program. I will be happy to talk to you about that.

Senator Pryor. I know that, and I know that is classified. But frankly, this is one of the old shell game tricks. Now, you have been at DOD a year, and I imagine you probably faced a bureaucracy in General Motors too. I can tell you it is alive and well at the Pentagon. If you don't get a program, or if the program is slow, or if it doesn't have the popular appeal, if it is not working, you simply put it in, as they say, a "black" program, which is a classified program.

Congress has really no control over this. We don't get to exercise oversight in the public. We don't get to ask questions like we are asking today about the ASPJ. It appears to me that the Air Force sort of gave up on a public program and now they are going private.

Mr. Atwood. But that was going on. That is no change by the Air Force, nor is it a change by the Navy. The action by the Air Force was simple. They asked for, because of fiscal constraints, to drop out of the ASPJ program, and we acceded to that request.

Senator Pryor. Mr. Secretary, let me say this. I am convinced that this decision was made with a very faulty process. I guess you would say the bottom line is that we are going forward today and spend millions and millions of dollars for a system that has not worked.

You mentioned in your brief opening statement, Mr. Secretary, the need for 2-year funding for the Defense Department. You know, I could argue for that position.

I could also argue against it. If we had 2-year funding for a program like this, then you eliminate the opportunity for Congress to come back and say wait a minute, this program is not working, but you are expending millions of dollars. That is what worries me about 2-year funding.

Mr. Atwood. I would not on a 2-year funding ever relieve the Congress of the right to come back and question it. I would not imply that at all.

Senator Pryor. Well, many times Congress, I think, feels that commitments, such as this $668 million commitment, is one that we cannot rescind. You have made that commitment. We were saying to you, don't commit until the system works. We don't understand that process.

Mr. Secretary, last July 11th you and Secretary Cheney held a press conference. Let me quote, "If one goes back and looks at programs that are late or they are overrun or they have technical problems, invariably you will find that they went from one phase to the other without passing the exit criteria. The reason is obvious, no one likes to see a program killed, especially if it is your own. It needs to be disciplined. We need to discipline it so we can take a program from one phase to the other when we know it has met all the criteria, that's the key."

Now, what I am saying to you, Mr. Secretary, I think you are still searching for that discipline. I hope you find it.

Mr. Atwood. I don't recall saying that exactly, but it sounds good to me as you read it and I will take credit for it. I believe very strongly in that.

Senator Pryor. Well, I hope the principles that you espoused are still those that you hold dear. I am sorry to have appeared a little bit strong with some of these questions to you, sir, but once again, I am only trying to get to the bottom of this.

Mr. Secretary, we thank you very much for your appearance.

Mr. Atwood. I appreciate your attitude and I hope you understand I feel very strongly we followed the proper procedures. We are in the middle of a program which has had a very long history. I want to make sure that there is no misunderstanding. I did not reverse it, nor did I reverse a DAB position, nor did the Defense Acquisition Board reverse anything I recommended last August. This system, if it proves out in tests, will be well worth everything we have put into it. If it does not prove out in tests, we will cancel it. I assure you of that.

Senator Pryor. Mr. Secretary, I just want to mention this fact. On our next panel is Derek Vander Schaaf, the Deputy Inspector General, who has put together a very strong audit report. Mr. Vander Schaaf is going to explain this report. I don't want to say there are smoking guns in there, but I would say it is very critical of the ASPJ acquisition process.

If you should like, sir, please stay and listen, and if you want to come back and refute the Deputy Inspector General, you will be welcomed back to the table.

Mr. **Atwood**. I appreciate the offer. I have reviewed the report. Number one, there was an allegation that I did not look at any of the data before I made a decision. I believe that report refutes that allegation 100 percent.

Number 2, there were allegations about the test data itself, nothing to do with whether I reviewed it or not, and I have reviewed that and I am sure that is subject to some discussion. I have no rebuttal to make on that.

I do stand on the fact that this program is under evaluation. It either will pass or fail its test programs. It will either go on or it will be canceled, depending upon the success in that test program, and I appreciate your efforts very much.

Senator **Pryor**. Do you still feel that the Congress in next year's budget for the Department of Defense should appropriate $173 million?

Mr. **Atwood**. For which year?

Senator **Pryor**. For 1991, the request that will be coming before the Senate in a matter of weeks.

Mr. **Atwood**. Yes, I feel you should, and that money will not be used if in fact it does not pass its tests that are coming up.

Senator **Pryor**. Thank you, Mr. Secretary.

Mr. **Atwood**. Thank you very much.

Senator **Pryor**. On our next panel will be Mr. Derek Vander Schaaf, Deputy Inspector General, Department of Defense; the Honorable Robert C. Duncan, the Director of Operational Test and Evaluation, Department of Defense; and Mr. Louis Rodrigues, Director of Command, Control, Communications, and Intelligence Issues, from the General Accounting Office.

I believe that Mr. Rodrigues is accompanied by Mr. Jack Guin, who is the Assistant Director for C3I Issues. To all of our witnesses this morning, once again we thank you.

Mr. Vander Schaaf, I would like to once again commend you and your very diligent staff for this audit report [1] and all those who participated in its preparation. It was very courageous and very thorough.

We appreciate all of you coming this morning and we look forward to your statements.

TESTIMONY OF DEREK VANDER SCHAAF, DEPUTY INSPECTOR GENERAL, OFFICE OF THE INSPECTOR GENERAL, DEPARTMENT OF DEFENSE [2]

Mr. **Vander Schaaf**. Thank you, Mr. Chairman. As you know, we did the audit and in this audit of the Airborne Self Protection Jammer (ASPJ) and in the audit we identified three major issues that require management attention in the very near future. They are: (1), the inherent cost risks in the Navy's plan to buy the

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[1] See p. 99.

[2] See p. 51 for Vander Schaaf's prepared statement.

ASPJs before operational tests confirm the system will work in a combat environment; (2) the reasonableness of the estimated cost of the program; and (3) the completeness and accuracy of the independent test results presented to decisionmakers.

In August 1989, the ASPJ program provided for 2,303 of these units, including about 1,500 for the Air Force and about 800 for the Navy. At that time, the estimated life-cycle cost of the ASPJ program was between $7.3 billion and $8.9 billion. In December, as you mentioned earlier, the Air Force withdrew from the program. The Navy has not estimated the cost of this reduced program at this point in time.

Our audit responded to a DOD Hotline complaint that questioned the approval by the Deputy Secretary of Defense for the Navy to buy 104 of the jammers, at a cost of over $400 million, while at the same time 20 production validation units were on order and could be used for operational testing. The complainant alleged that the Deputy Secretary, while granting the approval, ignored information which showed that ASPJ units did not meet operational effectiveness and suitability requirements and ignored information that showed the cost of the program to be understated by $1.6 billion.

During the audit, we received a supplemental Hotline complaint, and it questioned the following: (1) the reliability of the ASPJ; (2) the number of units the Navy plans to buy before determining whether the system will be effective and suitable for combat; (3) the reasonableness of the costs; (4) the accuracy of the test results briefed to defense decisionmakers last summer; and (5) the Program Office's criticism of the criteria used to conduct operational tests.

On two occasions during our audit, we sent correspondence to the Navy suggesting that the Secretary of the Navy consider actions that could reduce the 100 ASPJs bought on the Lot 1 production contracts. On October 23, 1989, shortly after the contract was awarded, I signed a letter to the Secretary of the Navy recommending that the number of ASPJs on the contract be in fact reduced or eliminated.

In January 1990, the Inspector General again recommended that the Secretary of the Navy determine whether it would be cost beneficial to stop work on the contracts for a short time to decide the disposition of the Air Force funded ASPJs. In other words, we were looking at what was going to be the situation, since the Air Force was out of this program. Should we stop the program at that point and wait for some operational test results?

Let me get into our audit results at this point. Our audit concluded that the primary allegation was invalid. Documents showed that the Deputy Secretary of Defense was well aware of the test results and of concerns about the accuracy of the cost data. The Deputy Secretary considered those matters before making a decision to buy 100 of the jammers. The Deputy Secretary authorized the award of Lot 1 production contracts mainly because the Navy informed him that, if the action was not taken, the vendor base for the ASPJ would dry up and because the Navy and the Air Force would have 1,000 aircraft without ASPJs if the contracts were not awarded.

We found the other allegations were valid. Unlike the first allegation that we received last August, which was found to be invalid, these other allegations proved to be valid.

Now, with respect to these allegations—let me go through them—with respect to the effectiveness and suitability of the ASPJ for use in combat. The Navy and the Air Force conducted three initial operational tests of the ASPJ. The primary purpose of these tests was to determine the operational effectiveness. None of the three tests confirmed the effectiveness and suitability of the ASPJs. I am unable to discuss the details of this because they are classified, but the subcommittee has access to our classified report on that matter.

However, I can say that the next operational test and evaluation is not scheduled to start until September 1991, and that is in my statement, but I believe that has now slipped. At one point it was March 1991, then it went to September 1991. Mr. Duncan is here and I guess he can sort out when we are going to start these operational tests. But clearly, we are not going to have these operational tests completed in fiscal year 1991.

My current guess is that we will not have good operational test data until late 1992 at the earliest, and probably by the time we complete the tests and analyze the data, we are looking into early 1993.

When we started our audit the Navy had already placed 20 of these production verification units on contract. They planned to buy 104 more in 1989, 155 in 1990, 157 in 1991, for a total of 436 before operational test and evaluation was completed. That was based upon this earlier operational test plan at that point.

On October 6, 1988, the Navy contracted for 100 of the 104 ASPJs planned for purchase in 1989, but had to revise its plans for future buys because the Congress did not authorize funds to buy the 155 planned for 1990, and because the Air Force withdrew from the program. The Air Force withdrawal, obviously, reduced the requirement for ASPJs by about two-thirds, from 2,303 to some 794.

At the end of our audit, the Navy had not revised its acquisition plan. However, we have been informed that the Navy plans to negotiate two more production lots before completion of operational test and evaluation.

Let me now get into the Navy's reasons for continuing to buy the ASPJ. The Navy chose not to interrupt its acquisition plan because it was concerned the vendor base for ASPJ production would dry up if there was a break in ASPJ production. They were concerned, of course, about equipping a thousand aircraft that would be without this capability. We found that the Navy overstated the potential for the vendor base to dry up. Data on the two prime contractors for the ASPJ and 15 of their critical vendors showed that a break in production would not cause the vendor base to dry up.

I am again unable to provide the details on this matter. Some of this is considered to be company or corporate proprietary information.

The Navy claim that 1,000 aircraft would be without ASPJs was factually accurate but misleading. The claim inferred that there was a requirement for 1,000 ASPJs and that Lot 1 production was necessary to help satisfy that requirement. Program Office requirements show that only 668 ASPJs were needed to support the 1,000 aircraft because planned operational use did not require a one-for-one relationship.

Also, this claim did not address the availability of alternative jammer systems. We determined that proven jamming systems could be used to satisfy 638 of the 668 ASPJ requirements. The other 30 ASPJ requirements were for the F-14D aircraft, which had access to standoff jamming protection and were equipped with a radar warning receiver. Operational test data compiled to date indicates that the ASPJ represents only a modest advance in capability over alternative, less costly jamming devices.

Now, if it proves out, the jammer will represent a significant advance, but what we have been shown today from the testing is at best a moderate improvement over existing capability.

The Navy plan to continue buying ASPJs before completion of operational tests exposes, in our opinion, the Department of Defense to unnecessary cost risks and deployment delays. We are unable to specify how much cost risk the DOD would be exposed to because of the Air Force withdrawal from the program because the ASPJ Program Office had not revised its acquisition plan at the time we finished our audit. However, we conservatively estimate that the Navy currently plans to commit about a billion dollars on production contracts before operational tests are complete. Our audit showed that $668 million of that $1 billion is already on contract.

Considering the ASPJ's poor operational test results, we believe it would be prudent to limit the production to the production verification units—those first 20 units I talked about which were put on contract about 3 years ago—until after operational tests show that the ASPJ is operationally effective and suitable for combat. Then at the same time we are proposing in the audit report that they consider stretching the hundred ASPJs that were placed on order last October 6th.

The estimated cost of the program may be significantly understated in our viewpoint. The DOD Cost Analysis and Improvement Group, (CAIG) assessed the program cost estimate and concluded that it may be understated by as much as $1.6 billion, or about 22 percent more than the Program Office cost estimate of $7.3 billion.

Although the Air Force's withdrawal from the program reduced the total program costs, we believe the estimated program costs are still understated. For example, one of the more significant areas that the CAIG questioned were the estimated savings from dual sourcing ASPJ acquisitions. Now that we are buying a much smaller number of ASPJs, the savings from a dual sourcing alternative are obviously going to be less. Another difference in these two estimates was with respect to $300 million to $600 million on the cost of the traveling wave tubes for this equipment. Both of these areas need to be addressed since they are still applicable to the reduced program.

Let me turn to the operational test results that were presented to decisionmakers. We believe that the operational test results that were presented were in some respects incomplete and misleading. In a May 1989 presentation, the Command, Control, Communications and Intelligence Systems Committee, the Navy Operational

Tester, that's OPTEVFOR as it is referred to, did not identify significant test limitations and unresolved critical operational test issues. Information presented to the Systems Committee was incomplete and misleading because the Navy ASPJ Acquisition Review Board directed the Navy Operational Tester to limit the test results that were briefed to the Committee and to stress positive results to the Committee.

We believe the board directed those actions because the complete test results did not clearly support a production recommendation. Also, the System Committee minutes that were provided to the Defense Acquisition Board did not accurately summarize the Operational Tester's presentation. According to those minutes—and this is what was put in the books that were given to the DAB members—the Navy Operational Tester stated that, "ASPJ satisfied most of the testing requirements, that it offered significant capability improvements over existing systems, and that the Commander, Operational Test and Evaluation Force, fully supported the requested low rate initial production decision."

We learned from the Navy Operational Tester, and from his briefing materials, that he did not advise the Systems Committee that the ASPJ satisfied most of the testing requirements and that the Commander of the Navy Operational Test and Evaluation Force did not fully endorse ASPJ for production.

Mr. Chairman, let me emphasize that the principals of the Defense Acquisition Board, however, were fully aware of the operational test results, despite the information in the Systems Committee's minutes. Documentation that we obtained during the audit clearly showed that key principals were aware of the poor test results. We reported on this condition because acquisition officials should not be trying to influence operational testers from presenting objective and complete test result to decisionmakers.

Let me talk about some of the recommendations in our audit. To reduce the cost risk of the ASPJ program, we recommend that the Under Secretary of Defense for Acquisition defer further production decisions on the program until completion of operational test and evaluation. We also recommend that the current Lot 1 contract be renegotiated and stretched out and the delivery stretched out for the 100 ASPJ units to preclude a break in production before completing operational test and evaluation.

To some extent I am going at a moving target here. Mr. Duncan can probably fill us in a little better on when operational test and evaluation is going to be completed, and he is going to be in a position to make a recommendation to defense management on whether the system is suitable for deployment.

To resolve the questionable cost estimate for the ASPJ program, we recommend that the Under Secretary of Defense for Acquisition direct the Program Office and the CAIG—that's the Cost Analysis Improvement Group—to immediately identify: (1) differing cost estimating assumptions, (2) develop an agenda for resolving the differences, and (3) resolve the differences by August 1, 1990.

Now, management responded to our draft, and they basically nonconcurred, or that was their initial statement. However, as I looked over the response, it was reasonably responsive to what we were proposing. For example, the response clearly indicates that they are going to take a good hard look at deferring production and stretching this production process out on the hundred ASPJ's that are currently under contract.

Regarding program costs, they have initiated a review group underway now to revise the cost estimates. With respect to the tester's independence, they nonconcurred. However, we have documentation showing that critical information was left out of the independent Navy tester's presentation. Also, we have minutes of the Command, Control, Communications and Intelligence Systems Committee's review of the ASPJ program showing that the Navy's independent tester's overall test conclusions and production recommendations were put in the best possible light by emphasizing the positive results and largely ignoring the negative results.

I think that pretty well completes a summary of my statement and the audit report that supports that statement, Mr. Chairman.

Senator **Pryor**. The entirety of your statement, Mr. Vander Schaaf will be placed in the record.

Mr. **Vander Schaaf**. Thank you.

Senator **Pryor**. We want to thank you once again for this very splendid report. I think before I ask you questions, Mr. Vander Schaaf, we will yield to Dr. Duncan, and then to Mr. Rodrigues, and if we could summarize our basic findings from here on in, that would be most appreciated.

TESTIMONY OF HON. ROBERT C. DUNCAN, PH.D., DIRECTOR, OPERATIONAL TEST AND EVALUATION, DEPARTMENT OF DEFENSE

Dr. **Duncan**. Thank you, Mr. Chairman. I have a statement to be entered into the record.[1]

Senator **Pryor**. Yes. We will take that full statement for the record.

Dr. **Duncan**. And I would like to summarize it briefly for you.

As you know, the ASPJ was indeed operationally tested in 1988 and 1989. The operational testing was planned to provide a step-by-step approach to the test and evaluation of the system. As such, four tests were to be performed. All four series of operational tests were to be conducted with the full-scale development test articles of the ASPJ.

The first three series were to determine the capabilities of the system exclusive of weapons system interoperability. These first three operational tests focused on the ASPJ hardware itself. Series 1 and 3 involved flight tests, but were not conducted on operationally configured aircraft, they were conducted on F-16A and F-18A aircraft.

The second series of tests was at the Air Force's Electronic Warfare Evaluation Simulator in Fort Worth, Texas. The fourth series of operational tests was to determine the capability of the system to operate on mission aircraft, but these tests were not performed. Both aircraft, the F-18 and the F-16 were to have been loaded with operational weapons so we could fly an operationally realistic mission. However, at the conclusion of the first three tests it was obvious that substantial changes were required in the ASPJ system. In addition, the test article in its then current configuration was no longer considered to be representative of production units. Therefore, the fourth series of tests were canceled. Since the cancellation, no additional operational test and evaluation of the system has been approved.

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[1] See p. 67.

The results of these tests were presented by the Service Operational Test Agencies, COMOPTEVFOR in the case of the Navy, and AFOTEC in the case of the Air Force. Overall, the system as tested was reported as only marginally operationally effective and marginally operationally suitable. My office, although I was not the director of the office at the time, did an independent evaluation and concurred with the marginally effective and marginally suitable evaluation.

The test identified deficiencies that require what I believe are substantial changes to the system. They also identified the necessity to develop better equipment to fully exploit the reprogrammable capabilities of the jammer. Design changes to correct deficiencies are being incorporated into the production verification units—the first 20 units—and the low rate initial production units, Lot 1. The Navy has also contracted for an improved piece of equipment called the User Data File Generator, which will more fully exploit the reprogrammable capabilities of the ASPJ.

Some questions concerning the measures of effectiveness arose during the test approval process and again after the test results were in. The Acquisition Decision Memorandum issued last summer that you have referred to, directed a review of these measures, and we have a joint task force of Navy and Air Force personnel who are proposing a different set of measures of effectiveness.

The August 1989 ADM also approved the procurement of Lot 1 LRIP articles. The DOT&E community concurred in this action with qualifications. The main qualifier was that LRIP be defined as Lot 1 only, plus the 20 PV units. DOT&E also recommended the system not be deployed until it could be satisfactorily operationally tested. The ADM directed the Navy to provide exit criteria for procurement of Lot 2 and Lot 3 units. My recommendation from a test perspective on this is that no additional procurement beyond Lot 1 be undertaken until a production representative system successfully completes operational tests on mission configured aircraft. In other words, I continue to support the original position articulated by DOT&E, LRIP should be Lot 1 plus PV units only.

Now, Title 10, Section 2400, which you had a significant part in drafting and passing, defines LRIP as follows: Production of the system in the minimum quantity necessary, one, to provide production configured or representative articles for operational tests; two, to establish an initial production base for the system; and three, to permit an orderly increase in the production rate for the system sufficient to lead to full-rate production on the successful completion of operational testing.

As paragraphs 2 and 3 of this section clearly indicate, considerations other than the required operational test articles do play a role in the determination of the LRIP quantities.

Senator PRYOR. Dr. Duncan, if I may interject right here, I have read your very fine statement. We will place it in the record. I have several questions for you just on some of these very points, so rather than both of us repeating ourselves, why don't we go to Mr. Rodrigues now, and then we will go to questions. I hate to interrupt you.

Dr. **Duncan**. Yes, sir, Mr. Chairman.

Senator **Pryor**. Mr. Rodrigues.

TESTIMONY OF LOUIS J. RODRIGUES, DIRECTOR, COMMAND, CONTROL, COMMUNICATIONS, AND INTELLIGENCE ISSUES, GENERAL ACCOUNTING OFFICE, ACCOMPANIED BY JACK B. GUIN, ASSISTANT DIRECTOR

Mr. **Rodrigues**. Thank you, Mr. Chairman. I would like to have the formal statement submitted for the record [1] and proceed with a summary.

Senator **Pryor**. Your full statement will be placed in the record.

Mr. **Rodrigues**. Thank you. Mr. Chairman, I am pleased to be here today to discuss ASPJ. At the request of this Subcommittee, we have examined how ASPJ test results were reported and used in the low rate initial production decision and the Inspector General's conclusions from its audit of the ASPJ program.

ASPJ is intended to increase aircraft survivability by masking its location or deceiving enemy radar as the true location of the aircraft as shown in that chart up there on the right. The purpose of the ASPJ operational test program is to determine whether the system is capable of effectively countering defensive threat. Initial operational testing is used to predict potential operational effectiveness and potential operational suitability.

Initial operational testing started in July 1988 and was completed in February 1989. The Navy completed its report on operational testing in April 1989, but the Air Force did not finalize their report until August 1989. However, results of these tests were presented to briefings of cognizant boards and committees prior to the low rate initial production review in June 1989.

Some of the briefings on the test results may have been overly optimistic. As the IG observed, these briefings may have been influenced by inappropriate direction by the Naval Air Systems Command's Acquisition Review Board. At its April 20, 1989 meeting the Board denied approval to go forward to the next review level because Navy and Air Force testers had not provided a clear supportive recommendation for low rate initial production. The Board also recommended that the Navy and Air Force test organizations stress positive test results in future program briefings. In fact, Navy and Air Force test reports show that although required to do so during initial operational testing, the ASPJ did not demonstrate potential operational effectiveness and suitability.

Navy testers concluded that ASPJ was marginally operationally effective and marginally operationally suitable, and to become potentially operationally effective the system had to be tested against and meet other known threat requirements, and to become potentially operationally suitable, certain critical operational issues had to be resolved.

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[1] See p. 74.

Navy testers recommended disapproval of the ASPJ for limited fleet introduction until several corrective actions were taken and verified during additional testing. According to the Air Force test report, all critical operational issues in the test plan were assessed, but many ratings were undetermined because the full scale development version was not mature. In fact, these testers concluded that critical operational suitability issues were undetermined because the system tested was not production representative.

Like the Navy, Air Force testers did not specifically recommend low rate initial production, and in a highly qualified statement, concluded that tests of the production version would be necessary to determine the system's effectiveness and suitability.

On May 17th, the Office of the Director of Test and Evaluation reported to the Assistant Secretary of Defense for Command, Control, Communications and Intelligence on the ASPJ's test results. The Office concluded that ASPJ was marginally operationally effective and marginally operationally suitable. It also concluded, as did the Navy, that the system should not be deployed until a successful operational test is conducted. Given only the options of approving low rate initial production or program termination, the Office recommended approval on July 17, 1989.

Regardless of the quality of the test results or how they were reported and interpreted, the Deputy Secretary of Defense and the Under Secretary of Defense for Acquisition knew at the time of their decision that the ASPJ was marginally operationally effective and marginally operationally suitable. They were aware that ASPJ had not satisfactorily met exit criteria for authorization to proceed to low rate production. Nevertheless, on August 7th the Under Secretary recommended approval and on August 16, 1989, the Deputy Secretary concurred in that recommendation.

According to the Defense Management Report, dated July of 1989, major acquisition programs must meet established cost, schedule and performance requirements or exit criteria before they can transition from one milestone to the next. From documents we reviewed, it appears that the decision to approve low rate initial production was based on management's prerogative rather than strict adherence to the principles of DOD's acquisition guidance, or the Defense Management Report.

The Under Secretary offered two options to the members of the Defense Acquisition Board, approve limited rate production, or terminate the program. A third option, to delay a decision in the hope that further testing would provide for a favorable decision was considered. This option could have been implemented using the 20 production verification units already on contract. However, members of the Board argued that termination or delay would have an adverse effect of operational aircraft and on the vendor base. Although these arguments were undocumented, the Deputy Secretary and Under Secretary apparently recommended approval for the decision largely based on their concern for vendor based dry up and impact on operational aircraft. As the DOD IG reported, it could not validate these concerns during its audit.

The recent IG audit confirms the problem with the ASPJ program will probably be exacerbated by the Air Force withdrawal.

One of the most obvious impacts is a significant increase in unit costs as a result of the drop in the planned buys.

We agree with the IG's major recommendation calling for elimination of follow-on limited rate production decisions. Low rate initial production should be limited to the 100 units currently on contract, especially as the total program buy is expected to drop to approximately 800 units. In addition, we agree with the IG's proposal to stretch out deliveries of low rate initial production units so that complete and adequate operational test and evaluation can be accomplished without a break in production. If these recommendations are implemented, DOD would substantially reduce program risk.

Mr. Chairman, before concluding I would like to express our concern about the implications of the Air Force withdrawal. As we have reported a number of times during the 1980s, electronic warfare programs are marked by extensive and unnecessary proliferation of systems to meet a common threat. However, the ASPJ had represented, or it does represent, a joint program offering potential for achieving the significant benefits inherent in common service systems. These benefits include elimination of duplicative research and development costs, savings in production resulting from larger quantity buys, and reduced logistics costs stemming from common spare parts, maintenance equipment, and training.

The current concern about the pending ASPJ unit price increase resulting from the Air Force withdrawal clearly reinforces our belief that common systems can result in significant savings. If the Air Force decides to develop and procure a new internal jammer to meet its needs, our concern with unnecessary proliferation and duplicative costs will be further reinforced.

I want to make it clear that GAO is neither an advocate nor an opponent of the ASPJ. However, as we have recommended in the past, DOD should acquire a common jammer to meet requirements, whether it be ASPJ or an alternative.

Mr. Chairman, this concludes my testimony and I would be pleased to answer any questions.

Senator PRYOR. Mr. Rodrigues, thank you. I want to thank not only you but your staff who have been so helpful in preparing for this hearing. As always, the General Accounting Office has performed splendidly. We thank you. We will have a couple of questions in a moment.

If I can go to Mr. Vander Schaaf now with a few questions. First, I have here your audit report, Mr. Vander Schaaf. I am looking on page 54. [1] This is a memorandum on the subject of the Airborne Self-Protection Jammer Acquisition Review Board, held on the 20th of April, 1989. It is from the Commander, Naval Air Systems Command. I will read paragraph (B): "It is recommended that prior to the next review the operational testing briefs be streamlined by simplifying the technical data discussions, summarizing the results, making clear recommendations. It is also recommended that the positive test results be stressed."

What sort of a message is that, Mr. Vander Schaaf?

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[1] See p. 152 of hearing.

Mr. **Vander Schaaf**. That sends a message, obviously, to the testers, which can affect their degree of independence. The message says to tell it a little better than it is, if I can put it in those terms. Put the briefs in the best light, don't show the negatives, and so forth.

When we then tracked some of the briefing material that went up to the Navy's decision board, and then to the briefing to the C3I/OSD Committee level, I think we saw some couching. In fact, some of the test limitation information which we describe earlier in the audit report, and list in the unclassified report, Appendix D, on the impact of those limitations on whether this system meets the threat and works in a combat environment, they were sort of, shall we say, skipped over in that process. They were not briefed as well as they could have been.

Now, I want to add that there are a lot of smart people in OSD and there are a lot of staff people who dug around and sort of went around on their own and were able to gather this up. I just think it sends the wrong message. That is one of the reasons why this stayed in the audit report. All we are trying to do is reemphasize the need not to put undue pressure on the testing community to report good results. That is what appears to happen a three-star Admiral signs a directive to kind of clean up the test results.

Senator **Pryor**. Well, you certainly picked up on this issue on page 17 in your audit report.[1] I think your findings were very illuminating, to say the least, as to what was going on during that period to make it appear that these tests results were more positive than they actually were. That is this layman's interpretation of what was going on at that time. Perhaps someone would like to refute that.

Mr. **Vander Schaaf**. I think that is a reasonably fair interpretation.

Senator **Pryor**. Who headed the Navy Acquisition Board for the ASPJ? Who was that individual?

Mr. **Vander Schaaf**. I'm not sure. I think Secretary Garrett must have done it at that point. He is here, I understand, and he is going to testify, so I suggest you ask him that question. I am not sure.

Oh, the Naval Air Systems Command Board was headed by Admiral Wilkinson, but then they went up another step to the Navy Procurement Decision Board, and I am not sure who ran that meeting.

Senator **Pryor**. While we are talking about steps in the chain of command, let me—I think we have a chart made up.[2] I don't know if the witnesses can see that over there. Can you see this, Mr. Vander Schaaf?

Mr. **Vander Schaaf**. I can see it.

Senator **Pryor**. We start up there with the DOD Deputy Secretary of Defense and come on down to the ASPJ testing. That appears to be the chain of command.

Mr. **Vander Schaaf**. That is the testing chain.

Senator **Pryor**. The testing chain.

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[1] See p. 121 of hearing.

[2] See p. 95.

Mr. **Vander Schaaf**. I hope you could show with a dotted line on there that Mr. Duncan's office is aware, and is tied in with the Naval Test Organization and the ASPJ tests, themselves, as they were conducted at Eglin Air Force Base and China Lake. I think he had a contractor who was watching this and helping to score it.

Dr. **Duncan**. Would you like for me to comment on that, sir?

Senator **Pryor**. Yes.

Dr. **Duncan**. That is an accurate representation of the flow of the acquisition decision process. Now, the references in the IG report about the reporting were within the Navy elements of the organization, the bottom three lines, the bottom three boxes, and then a report to the C3I Systems Committee, which is what we call a DAB Committee, and it reports to the DAB.

Now, in addition to anything that comes up through that Committee structure with respect to operational testing, my office plays another role. We have a report that goes into what we call the blue book, which is the book that is made available and is part of the acquisition process, part of the DAB meeting, in which we independently report on—and you know this very well because you were very much behind setting up the structure—independently report on our evaluation of the system. And so we came in with an input to the next to the top box, and there was no——

Senator **Pryor**. At the Defense Acquisition Board?

Dr. **Duncan**. Yes. And the Director of Operational Test and Evaluation sits on that board.

Senator **Pryor**. Yes. I was going to ask that question.

Dr. **Duncan**. I was not that director at that time, but he sits on that board. Now, I sat on the board at that time also, but in a totally——

Senator **Pryor**. Was Mr. Krings still the director at that time?

Dr. **Duncan**. He was the director at that time. I sat on the board in a different category at that time. I sat on it as Director of Defense Research and Engineering, so I was there.

Senator **Pryor**. All right. How many are on the Defense Acquisition Board?

Mr. **Vander Schaaf**. I believe 11, if you include all three services.

Senator **Pryor**. It is a very powerful group.

Dr. **Duncan**. Each of the service acquisition executives.

Mr. **Vander Schaaf**. And the Deputy Chief of the JCS.

Senator **Pryor**. I sure would like to come some day and just sit in one of these meetings, but I doubt if they would allow that.

Mr. **Vander Schaaf**. There are 11 members.

Senator **Pryor**. Thank you, sir.

Dr. **Duncan**. I can recite them.

Senator **Pryor**. By the way, just to fill me in, when Mr. Krings sat on that board, did he vote to go forward with the ASPJ?

Dr. **Duncan**. Mr. Krings voted—well, let's see. Mr. Krings didn't vote. Let me explain the series of events. This board meeting was held in the middle of June, June 12th I believe. Mr. Krings left on June 30th. Mr. Adolph was acting DOT&E from June 30th until I took over at the end of November. Now, Mr. Adolph was the one who actually voted.

The request for votes didn't come out until mid-July, so Mr. Krings had already gone, and Mr. Adolph voted, representing the Office, he voted to proceed—we were given two opportunities, one vote was to cancel the program, the other vote was to proceed with low rate initial production, Lot 1. He voted to proceed with Lot 1.

Senator **PRYOR**. All right. Now, I am going to go back to Mr. Vander Schaaf for just a moment. I am trying to get an education here.

What is the C3I systems Committee? What is this now?

Mr. **VANDER SCHAAF**. That is the Command, Control, Communications and Intelligence Systems Committee. It is a Subcommittee of the Defense Acquisition Board, I guess the best way I can describe it is as a Committee that when a project comes up through what represents their area of technology or expertise, they review it. There may be one for aeronautics, et cetera. There may be one for—you know, there are different committees. And there is a new 5001 series directive being worked as part of——

Senator **PRYOR**. I can't keep up with all of that. Thank you. Just put all of that in the record, all right?

Mr. **VANDER SCHAAF**. All right. I don't want to lose you, but they are reducing the number of committees. But at this time I believe there are like 12 of these committees.

Dr. **DUNCAN**. Ten.

Mr. **VANDER SCHAAF**. Mr. Duncan says 10 committees. Now they are going to go down to 3, I believe.

Dr. **DUNCAN**. Four.

Mr. **VANDER SCHAAF**. Four. Okay. But these things are in flux at the moment with the Defense Management Review ongoing.

Senator **PRYOR**. Right. Everything is in flux.

Now, here is the audit report. You did a lot of work. You interviewed a lot of people. What did the testing officials who went to C3I Systems Committee at DOD tell you? What did they tell you?

Mr. **VANDER SCHAAF**. What did they tell us? As far as I know, we were able to dig out the problems when we interviewed them and looked at their work papers, et cetera. We looked at the totality of the information they had available to them. The totality of the information they had available was not necessarily presented to the C3I Board.

From the minutes it is hard to tell who got what outside of this Board action. We have reason to believe the OSD staff was well-informed about the shortcomings of this system.

Senator **PRYOR**. Of the test results?

Mr. **VANDER SCHAAF**. Of the test results, despite the fact that there were some pressures to put the test results in the best light. So I don't think that is a critical issue here, sir. The critical issue here is one of concurrency and was it really necessary to order this additional hundred units in the first place when you had 20 production units.

Senator **PRYOR**. You maintain that 20 was enough?

Mr. **VANDER SCHAAF**. Twenty units would have gotten us enough to do operational test and evaluation. Now, then the issue becomes one of what does a break in production cost and what would it do to the program, and are there some alternatives short of a break in production? I still maintain that we could have bought less than

100, significantly less, and stretched them out at the rate at which we were going to produce the 20. You have to remember that of the 20 verification units, I believe as of this point, only four units have been delivered, and 16 remain to be delivered. So we have a long way to go in this process and we could have stretched that out.

But the immediate argument is without any real good cost data, this will cost, "a lot of money." We have heard all kinds of estimates and we can get into that in a moment, but the real issue in this business, is do we test these things and get rid of this concurrency problem, and do we make sure it works before be buy it? The real issue is not whether this test data was slightly shaded or not, because in the end it wasn't the key issue.

Senator PRYOR. Well stated. Mr. Rodrigues, I think you wanted to chime in there.

Mr. RODRIGUES. Yes, I just wanted to add a couple of things there. As you know, in our role and our agreements with the Committee and with the IG, we did some independent work and then relied mostly on the work they were doing and assured that the scope and the approach and the methodology were appropriate.

In looking at the question that you had about the relationships with the C3I Committee and looking at the documentation that the IG had, clearly the testers believed that the minutes did not reflect their presentations and that in fact they were stated completely different than what they had presented and that they didn't have any opportunity to comment on those minutes, and that they don't normally

Mr. VANDER SCHAAF. I think that is a key factor also. Part of our recommendation, is that if you are going to summarize and otherwise describe to somebody at the OSD level or somebody up at the Navy headquarters level, or the top headquarters, they ought to go back to the testing people, the independent testing people, and say, is this a fair description of the situation? I think it is critical and they didn't do that.

Senator PRYOR. So right now we are committed to $668 million worth of ASPJ jammers that don't work?

Mr. RODRIGUES. Yes, and that is, as Mr. Atwood indicated earlier, those are production costs, that is only for the 20 PVs that went on contract earlier and the first lot of LRIP. That doesn't include RDT&E.

Mr. VANDER SCHAAF. Looking at our estimate—one billion 900 some odd million dollars have been put into the program to date, to include the $420 million that was put on contract last October 6th. That is RDT&E and procurement. That is where we stand today.

Mr. RODRIGUES. Let me just add one other thing. Another comment was on were the 20 PV units adequate to do testing? The answer to that is yes, but it would have required some restructuring in the test program, because they were going to do concurrent testing, Air Force and Navy concurrent testing on the systems. They would have had to change that approach, but they could have accomplished the operational testing without going to low rate initial production.

Mr. VANDER SCHAAF. You see, it gets back to this issue that we tried to spell out in the audit report, which is discipline in the decision process. We keep writing these revised processes, 5000.1 series, saying we are not going to let these programs go forward until they meet the exit criteria. This program did not meet the exit criteria and we went forward with 100 even though our audit results would point out—I think the General Accounting Office supports us in this—that we could have used just 20. It would have delayed the program. It might have cost a little more, but the contractors were not all staffed up. We could have kept that same rate, maybe bought 30 or 40 instead of 100 the second time around, and reduced our risk and our exposure to make sure we had the ASPJ working before we went further.

Senator PRYOR. I have a question for Mr. Rodrigues. If a jammer in one of the fighter planes does not work, and if a pilot turns it on in combat, what is the worst thing that might happen?

Mr. RODRIGUES. It could end up highlighting the aircraft to the enemy radar.

Senator PRYOR. In other words, announcing the presence of that particular craft?

Mr. RODRIGUES. Yes, it could.

Senator PRYOR. And this endangers the life of the pilot, I assume is the logical conclusion?

Mr. RODRIGUES. It certainly does. It increases the risk that he will be shot down, yes.

Senator PRYOR. Have you talked to any pilots about the ASPJ jammer?

Mr. RODRIGUES. No, we haven't.

Senator PRYOR. I wished I had called some pilots here. I should have called some today just to say, what do you folks think about this. I was negligent in not thinking about that until today. Maybe we can have another hearing to do so.

Mr. Vander Schaaf, what are the risks of producing several hundred of these jammers with serious performance and reliability problems that will be found after the operational tests are completed?

Mr. VANDER SCHAAF. Well, the risks are obviously cost risks that you will have to go back and either reconfigure, or that you will find that the system is only marginally more effective than the ALQ-131, the pod-mounted ALQ-184, or the Navy's ALQ-126. These are various versions and they come in sub-versions, which obviously are not as miniaturized, and are carried outside of the aircraft.

But we have to make a substantial increase here because we are talking, in current terms, of about $4 million or more per unit. So if they don't add a significant capability, then you have to rethink whether you want to do this. That's why I keep saying the risk is that we are going to have to fix the ASPJ and so forth.

Back when we first proposed to the Navy, October 23rd of last year, after the ASPJ's had been on contract about two weeks, we said, "why don't we cut this back?" The answer came back, well, we spent a lot of money already. Well, at that point in time, of that $420 million, we estimate that only about $900,000 had been expended and was at risk.

Now, as of February 21st, we are spending somewhere around three quarters of a million dollars per month. The Navy, in fact, has told us at one point that if we recommend stopping production that resulted in a break it would cost $1 million a day. Now, the contractors are nowhere near expending that kind of money yet, so that the time to consider doing something about this is now. The longer we delay, the more equipment will be ordered, and the tougher it will be to smooth this thing out until Mr. Duncan's people can say, "Amen," this thing works and will meet the combat threat and requirement.

Senator **Pryor**. The $4 billion that the Navy wants to spend on this, by the way, is somewhat equivalent to about two times the entire budget of the State of Arkansas that I represent, or try to.

I'll tell you what we are going to do, we are not quite through with this panel. We are going to take a 5 minute break.

[Brief recess.]

Senator **Pryor**. Well, ladies and gentlemen, we will reconvene. Thank you for your patience. Maybe all of us needed a little break there for a moment.

I think I only have one more question for Mr. Vander Schaaf. You say the Navy's arguments that without ASPJ production, the ASPJ subcontractors would leave the program and a thousand aircraft would be without radar jammers, is overstated. Is this right?

Mr. **Vander Schaaf**. Well, I think you are asking two questions. You are asking, first, about the vendor base business. We visited 17 vendors in conducting this audit and looked at where they stood. And yes, there is some potential that vendors would leave, particularly if there was a break in production. But we constantly have stated you didn't have to have a break in production, you could have bought less than 100 without a break in production. I am not even convinced that with a break in production they would go away. There is a complicating factor here in that this is a dual source program, in addition to having the test problems that have appeared in the early tests.

So, with that complication, it gets very difficult to know what the vendor base is going to do exactly. But we concluded it did not appear to be a major problem to us. There are good reasons for going slow.

Senator **Pryor**. In other words, the vendors would still be there?

Mr. **Vander Schaaf**. Yes. There might be one or two who drop out of the program, but there are alternative sources for those vendors.

The other part of your question dealt with the——

Senator **Pryor**. The thousand aircraft.

Mr. **Vander Schaaf**. The thousand aircraft. Yes. Well here I guess I have mentioned that already. We do have some capability. It is limited, but it certainly is as good as has been demonstrated by this system to date, and it is in hand. Plus, you have to look at alternative processes. You know, there are alternative ways to meet this threat thing, such as chaff. You can go at the target with an anti-radiation missile, and attack the target directly. There are other types of tactics that can be used. Obviously, the whole business is looking at low observables or stealth technology, and other ways to constantly work at this.

All we are trying to say to you and to the public, with our audit report is: let's be careful about this program before we go any further. Many of these previous systems I mentioned have gone through the very same problems that this system has gone through and they have had similar difficulties. We have gone ahead and produced them and then found out that these systems didn't quite do what we wanted them to do, or that the threat has changed. Those systems also had other difficulties. They are not programmable like this one will be, so when the threat changes they become even less useful.

What I am suggesting is, let's go slow, let's spend our money carefully, and let's make sure Mr. Duncan's people say that this thing is going to work, before we spend this kind of money.

Senator PRYOR. Now, this spring your office recommended a stop work on further production of ASPJs.

Mr. VANDER SCHAAF. That was in January.

Senator PRYOR. In January. What was the result of that?

Mr. VANDER SCHAAF. We had a nonconcurrence.

Senator PRYOR. Nonconcurrence. In other words, you were overruled?

Mr. VANDER SCHAAF. Yes. Well, that's fine. We are not in the management chain. We present our reasons to them and they make their decisions on how to do it. We got a response. I had a couple of phone conversations with the Secretary of the Navy about this program going back, I think, between September and January. He was responsive to our proposals in the sense that I think they looked at them. They certainly cooperated with the conduct of our audit. And from that aspect, I am satisfied.

I just wish that the decision had been different, because I think this program doesn't meet the tough criteria. We keep saying we are going to discipline these systems; if they don't meet exit criteria, we are not going to go forward. This program didn't meet those exit criteria and we went forward.

Senator PRYOR. What went wrong? Why did this chain of command basically look the other way at the exit criteria? Do any of us know?

Mr. VANDER SCHAAF. I don't think anyone knows for sure. I always have the concern that the availability of money created pressure. The Congress had appropriated the funds to go on contract for that, and once you have the funds it is extremely difficult to get a negative result and hold a program back. All of the pressures are there from the acquisition side, and the contracting community, to proceed with the program at that point.

Now, those funds I believe were not close to expiring. Those funds could have lasted awhile longer or they could have used less of them. There is nothing wrong with buying 20 ASPJ's instead 100, and giving the unused money back to the taxpayers, if you will.

Senator PRYOR. That would be a rare situation.

Mr. Rodrigues, did you have a comment on that?

Mr. RODRIGUES. I would like to comment on each of those areas. With regard to vendor base, we looked at how the IG approached that. When you look at it, there are 70 subcontractors. Clearly, the IG looked at 15 of those and the two primes. You could argue, that isn't the whole thing, so what else is out there?

The way they selected those 15 and identifying through the primes the critical subcontractors as identified by the prime contractors, as well as the documentation, indicates to us that the basis for their judgments in that area, that at the time vendor base argument was clearly overstated and the question of whether it would really dry up is a real question.

Now, that analysis wasn't done beforehand. It wasn't available to the decision-makers. They were working on people telling them that in fact these things would happen. Now, that's part of the problem, not having the analysis to make those judgments.

The thousand aircraft. I find it interesting to note that in ASD C3I's input to their final recommendation with regard to continuation of the program, they noted that 960 aircraft would be wired and awaiting ASPJ at the time that the first LRIP unit is delivered. That means that the problem exists. Now, how 100 units solve that problem is absolutely beyond me. Neither of us were talking about termination of the program, we are talking about delaying it to do proper testing to make sure that you get a good article to insert in those aircraft.

How that problem of the 960 that will be sitting there on day one of LRIP delivery is being dealt with by the services, I don't know.

Senator **Pryor**. That is a very critical point.

Mr. **Rodrigues**. It becomes exacerbated I think when you look at the Air Force's withdrawal from the program. At the time of the decision, these were critical needs to get these things out there for those aircraft. The Air Force now sees fit to be able to withdraw from that program, and my understanding from news articles I have seen, they are coming up with a program that will be in their 1992 budget to begin to address that. Well, what are they doing? I mean, if it was so critical, this 1,000 holes in the aircraft at that point in time to force them into an LRIP decision, why is it now that we are out there planning to start a new Air Force program that won't start untl 1992?

Senator **Pryor**. Mr. Rodrigues, I am a big believer in competition. After 14 years of looking at the history of the ASPJ has there ever been any competition in this program? You mentioned prime contractors, I think ITT and Westinghouse are the two. Has there ever been any competition?

Mr. **Rodrigues**. There was a down-select from the earlier part of the program. I am not exactly sure how that——

Mr. **Vander Schaaf**. I think the program was fairly well structured in terms of competition, sir. I don't think there is any——

Senator **Pryor**. You don't see any problems there?

Mr. **Vander Schaaf**. No, I don't see any problem there. As a matter of fact, now with the smaller buy, I do not think two production lines would be cost effective. It is obviously, not something we covered in the audit report, but from experience—and we have done audit work on dual sourcing—all too often dual sourcing has not been cost effective. I am not so sure it is going to be cost effective to carry two production lines much longer into this program. I certainly don't recommend walking away from that now on these 100 ASPJ's that we have on contract. We are building ourselves into this 100 every day we wait and don't make some decision. We will be stuck with what we have got there, and stuck in the sense the Navy will tell you it is a good deal and we ought to stay with it, but I think it is a risky business myself.

Senator PRYOR. Thank you, sir.

Dr. Duncan, let's talk about testing language. What does "marginally operationally suitable" and "marginally operationally effective," mean in testing lingo?

Dr. DUNCAN. That means to me, Mr. Chairman, that some of the requirements for operationally effective and operationally suitable have been passed and some of the requirements have not, but that it is felt in the eyes of the test community that the things that have not passed are correctable.

Senator PRYOR. All right. Is there anything lower than "marginally" effective? Is that the lowest denominator?

Dr. DUNCAN. Well, it is disapproved. It is not considered to be operationally effective.

Senator PRYOR. So if it is marginally suitable it is disapproved?

Dr. DUNCAN. No, sir. "Marginally" means——

Senator PRYOR. I understand. Excuse me. So disapproved would be——

Mr. DUNCAN. "Disapproved" would be the next lower down.

Senator PRYOR. Fine. Now, when will operational testing be completed?

Dr. DUNCAN. Well, the operational testing—the program, in looking over Mr. Atwood's prepared statement, which he didn't cover very much, the program is being restructured somewhat. He is asking the Navy to look at stretching out Lot 1. The Lot 2 buy is considerably lower, 46 units I believe. The timetables are somewhat different. It is my estimation that the operational testing would now be conducted, May 1991 and be completed in October 1991, according to that type of program.

Senator PRYOR. Mr. Vander Schaaf, do you agree?

Mr. VANDER SCHAAF. No, I think it is going to be later than that before the ASPJ gets going. Again, I suggest you ask the Navy program manager. He is trying to get that operational test and evaluation completed as soon as possible. Let's see what he has.

Senator PRYOR. Dr. Duncan, do you believe as Director of Operational Testing that the ASPJ should have gone into production last year?

Dr. DUNCAN. Let me comment on that statement in a round about way, sir.

When Mr. Stone was trying to poll the various members of the DAB because of the complexity of the decision process, I originally voted to cancel the program. I cast that vote as Director of Defense Research and Engineering. I came back after being away for about 2 weeks and met with members of my staff who were responsible for tactical warfare programs, particularly for aircraft, and air warfare. After they made a very strong case to me about the potential value of this system in the future and that we ought to take the risk to go ahead, I changed my vote. As the Director of Defense and Engineering, not as Director of Operational Test and Evaluation.

I changed my vote to support proceeding with Lot 1. Now, the Director of Operational Test and Evaluation had voted the same way as I did after I changed my vote, and I support that position also, based upon the data that I have seen as Director of Operation Test and Evaluation.

Senator **Pryor**. Is there a new system of testing criteria? What is MOEs.

Dr. **Duncan**. Measures of effectiveness, MOEs.

Senator **Pryor**. Does this ensure better results, these new MOEs?

Dr. **Duncan**. Well, it ensures—the purpose of the measures of effectiveness is to determine how effective the system is and in such a way that one can measure it in the operational test environment with the facilities and equipment that one has. We believe that the measures of effectiveness that are being redefined—and this came out in the ADM that we should take another look at the measures of effectiveness—are being worked at this time. It originally was a joint Air Force-Navy task force in which we are participating, and I think it is still working that way.

Senator **Pryor**. Now, are you getting pressured to use this new system?

Dr. **Duncan**. To go to the new——

Senator **Pryor**. To the new MOEs? Is that right?

Dr. **Duncan**. No, sir.

Senator **Pryor**. A new criteria for testing that might show better results?

Dr. **Duncan**. No, I am not. The ADM specified that we would look at the measures of effectiveness and refine them, because we have time to do so—but I did not see the motivation for that to be to make something that had previously failed now pass.

Senator **Pryor**. Dr. Duncan, all I am saying is be on the lookout for any sort of pressure. It may be subtle or it may be straightforward to try to make these results come out better. I can tell you, this weapons systems has legs. It has a constituency. We have committed so many hundreds of millions of dollars now and there is going to be a lot of pressure to go forward with this system.

Now, a final question to the panel. I am going to be voting on this issue probably in June on the Senate floor. Would you, if you were a Senator, would you vote "yes" or "no" on the issue of whether to appropriate an additional $173.4 million to the ASPJ program? What about you, Dr. Duncan?

Dr. **Duncan**. I would vote yes.

Senator **Pryor**. What about you, Mr. Vander Schaaf?

Mr. **Vander Schaaf**. I would vote no.

Senator **Pryor**. Mr. Rodrigues?

Mr. **Rodrigues**. I would have to say no, because both our recommendations are keep it where it is now.

Senator **Pryor**. Two-thirds of you say no.

Mr. **Vander Schaaf**. I think you can stretch this thing out and you can think about funding it again in the 1992 time frame if and when these operational tests have been completed, and successfully completed.

Senator **Pryor**. I shouldn't have asked you all that question, but I couldn't resist it. Frankly, I would like to take the $173 million and give it to the flood victims in Arkansas. I know it is needed there.

We will excuse this panel. I want to thank all of you very much. You have been very helpful and most constructive and I know the

Committee appreciates it. Thank you very, very much, all of you. We will now call our last panel.

Ladies and gentlemen, on the last panel we have the Honorable H Lawrence Garrett III, the Secretary of the Navy, accompanied by Mr. Gerald Cann, the Assistant Secretary for Research, Development and Acquisition, and the Honorable John J. Welch, Jr., the Assistant Secretary for Acquisition, Department of the Air Force.

Once again, we appreciate so much you being here and we look forward to hearing your statements. I must say that I have somewhat of a personal problem. I have got to catch an airplane before too much longer to go to Arkansas.

Mr. Secretary, if you could make your statement, we would appreciate it if you would summarize it, we would appreciate it even more. But take what time you need.

TESTIMONY OF HON. H. LAWRENCE GARRETT III, SECRETARY OF THE NAVY,[1] ACCOMPANIED BY HON. GERALD A. CANN, ASSISTANT SECRETARY FOR RESEARCH, DEVELOPMENT, AND ACQUISITION

Secretary GARRETT. Thank you very much, Mr. Chairman. I think I can summarize relatively briefly, if I may.

It is my position as Secretary of the Navy that we in the Navy have a requirement for a system with the capabilities of the ASPJ to protect our tactical aircraft well into the 1990s, and probably into the next decade. At this time the ASPJ is the only system that I know of that shows the potential to meet the Navy's need for an internally mounted self-protection jammer.

The performance demonstrated during initial operational test and evaluation with engineering development systems was superior to any existing system in terms of the number and types of threats to which it responds. The performance can only, in my opinion, improve from there.

Now, much has been said this morning about the process through which we have gone over the last 7 or 8 months, and I have to tell you, from my point of view, Mr. Chairman, the review that went on within the Department of Defense; first the Department of the Navy, then the Department of Defense; reviewed all aspects of the program, including the results of the initial operational testing. They were thoroughly reviewed by competent people in the Air Force, the Navy, and then the Defense Acquisition Board, who had the decision before them as to whether or not we go into the initial low rate production of 100 systems.

At the time, this decision was firmly supported by both the Navy and the Air Force. Of the many factors weighing in the decision to proceed were; the demonstrated operational need; the recommendation of the joint operational test director who supported low rate initial production; program compliance with previous Defense Acquisition Board guidance; and, vendor based concerns, which I was concerned about, and the clear indication that the measures of effectiveness used in the baseline did not adequately evaluate the system's performance.

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[1] See p. 86 for Secretary Garrett's prepared statement.

Since the decision, two events have occurred that have placed the program again in the spotlight. One event was the initial hotline allegation to which Mr. Vander Schaaf has referred. The other, of course, is the withdrawal of the Air Force from the program in December of 1989. We in the Navy are evaluating our options for mitigating the effect of that withdrawal.

These options include earlier completion of operational testing than was originally planned. I think this is now feasible for a couple of reasons. One is that we now have single service testing, that is, one aircraft type and two test sites as opposed to two aircraft types and five test sites. We continually, both in the Navy and the Office of the Secretary of Defense, including both Under Secretary for Acquisition Mr. Betti, and the Under Secretary of Defense, Mr. Atwood, are in the process of overseeing and reviewing the performance of ASPJ. The future of Lot 1 contracts, or any subsequent production, is always under scrutiny.

We are, as was reported by Mr. Duncan, considering delaying the Lot 2 contract, the low rate initial production award, to maximize the test data that will be available to us before we make a decision, while avoiding a production break. I made the decision to go ahead with Lot 1 contracts based on my confidence in the people who manage the program and the program itself. The Lot 2 awards must take place to avoid a production break and to ensure that we do not jeopardize the entire investment that the American taxpayer has made to date.

I want to assure you, Mr. Chairman, that each decision that we make or that I recommend to the Under Secretary for Acquisition, or to the Secretary of Defense, will balance the operational need with system performance and cost to ensure that the best possible decision is made for the taxpayer.

I plan to continue this program through operational test and evaluation, and at that time make a decision on whether to request approval for full rate production. I will continue to give this program my personal attention and review it and it's scheduled milestones.

Now, much has been said this morning, Mr. Chairman. As we discuss the business aspects of this program, I want to ensure that all of us who are involved in this process, keep in mind the primary objective of the ASPJ. You alluded to it in your early statement. And that is, our aviators, our Naval aviators, need this system to penetrate to the target, deliver their weapons, and return to fly and fight again. The survivability of our manned tactical aircraft is one of my top priorities, and to achieve that we need this capability in the fleet.

I would like to add one point, if I may, about the purpose of low rate initial production and related statutory requirements. One, of course, is the requirement that we provide the product necessary for testing. There are also two other requirements in that statute, Mr. Chairman. One is to establish the initial production base. The other is to permit orderly increase to full rate production. Those matters and requirements in the law were considered by me when I made the decision to go forward.

That concludes my statement.

Senator **Pryor**. Mr. Secretary, thank you.

Now Secretary Welch. Mr. Secretary, we appreciate you being here.

TESTIMONY OF HON. JOHN J. WELCH, JR., ASSISTANT SECRETARY FOR ACQUISITION, DEPARTMENT OF THE AIR FORCE

Mr. **Welch**. Thank you, Mr. Chairman. It is good to be here today.

I think the simple thing to say is that at the time, late last fall, the Air Force was under severe budget pressures, and based upon that we had to make some difficult choices. So during the fiscal 1991 program adjustments we did terminate Air Force participation in the ASPJ program, and it was due to affordability. And I think we can simply stop right there.

Senator **Pryor**. Well, that is good. That is what I call a brief summary. Thank you, Mr. Secretary.

Now, let me take a statement you said, Secretary Welch, and ask the Secretary of the Navy, Mr. Garrett, about it.

The Air Force has just stated they were under severe budget pressures last year and needed to make some cuts. Does that imply that the Navy had plenty of money and needed to find a way to spend some money?

Secretary **Garrett**. Absolutely not, sir.

Senator **Pryor**. All right. Why don't you do what the Air Force has done and back out of the program and go into a classified program to produce these jammers?

Secretary **Garrett**. Well sir, to be very frank with you, Mr. Chairman, we looked at many options back in the summer before the DAB, and thereafter, when we also had to look at the issue of where we cut our budget. Unlike the Air Force—and I can't speak for the Air Force—my conclusion, after looking at the entire spectrum of options was that the operational need was such that the Navy could not afford not to go forward. In other words, our position was that we couldn't afford not to because of the operational need and the requirements for our young aviators, whom we send over the target, to have a capability that will give them an opportunity to return and go back. That was my approach.

Senator **Pryor**. Mr. Secretary, I know you care about the safety of these pilots.

Secretary **Garrett**. I do, sir.

Senator **Pryor**. I can promise you that 100 members of the Senate and 535 members of the House share that same concern. There is not one of us, please know, that is trying to deny our pilots that safety factor.

Secretary **Garrett**. I understand that, sir.

Senator **Pryor**. If it took $10 billion to save the life of one pilot, or $200 billion, frankly I think I would vote for it. But that is not the issue. The issue is we are still buying these ASPJ jammers and testing later. Is that correct?

Secretary **Garrett**. Well, we have been testing all along. I think we have some 8,000 hours of tests on the full scale development models. The unit you see before you, Mr. Chairman, incorporates many of the changes that came out of those testing evolutions.

Senator **Pryor**. I appreciate your people hooking the ASPJ up this morning. I think they got here very early to do that. I was afraid that they were going to jam this hearing somehow.

Secretary **Garrett**. There were other aspects as to why I made the decision to go forward, Mr. Chairman, in addition to the operational need. One was my concern—and it was a valid concern in my opinion even though we may disagree with Mr. Vander Schaaf, and I think the Under Secretary supported me in this concern—and that was, we do need to establish a production base upon which to enter into production should we pass our testing. The other was the fact that if we were to terminate the program, then we would have to enter into another research and development program which would probably add not only years but hundreds of millions of dollars to get where we are today in this program.

In essence, when I came into the program many decisions were made already. I walked into the game in the fourth quarter; there were 10 minutes left. The question was: Do we walk off the playing field and quit and go find a new game? My answer was that we have too much invested at this point in time. This was the decision that I made at the Navy Program Decision Meeting at which the operational testers and I thoroughly discussed their position. This system will work and will pass tests or we will not go into full production. But I did not want to place ourselves in the position of de facto terminating the program.

Senator **Pryor**. Couldn't we have just bought 20 of the units and tested those?

Secretary **Garrett**. In fact, that is what we are doing. We are testing today, as we speak. This is the fifth production verification unit that we have undergoing tests. We will enter into more testing later, but I go back to the statutory requirement that I, as the Secretary, have to address. This is the issue of low rate initial production and establishment of the initial production base.

Now, when we came into this program, Mr. Chairman, the acquisition strategy—and I know you are interested in that—was established. Dual source competition, with which we in the Navy have had very positive results, was part of that strategy. We are reassessing that, but that is where we were with the Lot 1 initial rate production decision. We still have that acquisition strategy.

Now, as we go down this road we are going to have to reassess that strategy. We will probably have to down-select. What I would like to do, of course, is get through the operational test successfully, compete, and let the winner move forward.

Senator **Pryor**. We have present contracts which commit $668 million for ASPJ production.

Secretary **Garrett**. That's correct. That's the production verification units at a little over $200 million, and the low rate initial production, which is a little over $400 million, $429 million I think, that are on contract and obligated. We are receiving those production verification units, essentially one a month.

Senator **Pryor**. The Inspector General says that is too many units. Do you disagree?

Secretary **Garrett**. Yes, sir, I do.

Senator **Pryor**. What are you going to do with all those extra units?

Secretary **Garrett**. We are going to use them. We are going to put them in airplanes, sir.

Senator **Pryor**. All right. That's my question. What if they are ineffective and endanger the lives of the pilot?

Secretary **Garrett**. I would never authorize anything that is ineffective, faulty, or would endanger the life of the pilot in one of our tactical airplanes.

Senator **Pryor**. One of these days, years from now, we are going to walk through an empty Navy warehouse, with the exception of these things stacked up there, and I am going to tell my grandkids that I tried to stop the production of those things, and they are going to say, well, what are they? And I am going to say, it is the old ASPJ that never worked and we spent $4 billion or $9 billion for them. I hope I am wrong there.

Secretary **Garrett**. Mr. Chairman, let me say, I am not at all bashful about recommending that a program be terminated. When I put my case forth to the Defense Acquisition Board and the Under Secretary of Defense and the acting Under Secretary for Acquisition, I told them that if we did not successfully complete operational test and evaluation before we went into full rate production, I would recommend that this program be terminated. And I will do that. I am committed to you to do that and I am committed to the Secretary of Defense to do that if in fact we don't successfully complete our operational test and evaluation.

Senator **Pryor**. Well, that is not going to be completed until 1992 or 1993.

Secretary **Garrett**. Under the proposal that we are looking at now, since the Air Force withdrawal, we can compress the test schedule. We believe that we will be through with OPEVAL by November of 1991.

Senator **Pryor**. By 1991?

Secretary **Garrett**. November of 1991, yes, sir. In other words, we have one more low rate initial production decision to make. That involves the 46 units to which Dr. Duncan referred. That will allow us to continue to establish this initial production base and permit an orderly increase to full rate production, assuming we successfully get through our testing.

Senator **Pryor**. Is that why you are requesting $173 million for next fiscal year?

Secretary **Garrett**. That is correct, sir.

Senator **Pryor**. That will go to buy 43 more units?

Secretary **Garrett**. Forty-six.

Senator **Pryor**. Forty-six more units?

Secretary **Garrett**. Yes, sir.

Senator **Pryor**. You are going to test 20 units?

Secretary **Garrett**. That's what we are testing now as we receive them.

Senator **Pryor**. I never have figured out what you are going to do with these extra hundred units.

Secretary **Garrett**. We are going to put them in airplanes, sir, because we are going to be successful.

Senator **Pryor**. Can you retrofit these things if they are not successful?

Secretary **Garrett**. Yes, sir, at no cost to the Government.

Senator **Pryor**. At low cost, or no cost?

Secretary **Garrett**. No cost. That's in the contract. Both in the production verification and——

Senator **Pryor**. If I go and buy a washing machine or a refrigerator, I get a warranty with it.

Secretary **Garrett**. Yes, sir. We have warranties in the production verification contracts and in the contracts for low rate initial production.

Senator **Pryor**. What does that warranty say about what degree of effectiveness and exit criteria that must be met? What if it is marginally effective?

Secretary **Garrett**. I honestly don't know what the contract says to that, but I will look at it and provide it to you for the record.

[The information follows:]

The Lot I systems warranties are written to ensure the delivered system meet standards required by the Government in terms of reliability and performance. For reliability, the systems are warranted for 29 flight hours between removal for repair. For combat performance, the systems are warranted to meet the system specification. The contractor is required to retrofit, at no increase in contract price, any upgrades determined to be necessary to meet performance specification requirements.

"Exit criteria" is a term that refers to criteria provided by management to the program manager to assure that the system meets specified cost, schedule, performance and supportability objectives. Similarly, "marginal effectiveness" is not a warranty item but is terminology used to represent someone's judgment of the capability of a system. The Lot I systems warranties are not structured utilizing "exit criteria." Instead, specific systems standards for reliability and performance are required. Final acceptance is based on the item meeting the specification in the contract.

Senator **Pryor**. I will tell you what it says, "Once again the taxpayers have taken it." Because those contractors have the best end of that contract, I promise you.

Secretary **Garrett**. Again, it is my position, rightly or wrongly, as the Secretary of the Navy—and I believe the Under Secretary of Defense supports me in this—we have agreed that we will positively prove the system before we go into full rate production, which means we will have gone on contract for 146 units in the low rate initial production. If we are not successful we won't produce this product.

Senator **Pryor**. Have you informed the contractors that if we don't improve the test results of the ASPJ that we are going to ask for our money back?

Secretary **Garrett**. I have not informed them that we are going to ask for our money back, sir.

Senator **Pryor**. Why haven't you?

Secretary **Garrett**. Well, I have not entertained that, to be very frank with you. We are on contract to—they have an obligation to us, we have an obligation to them, obviously, to move forward. Whether or not we would have any relief in law or in any other way, if in fact it doesn't pass the operational test evaluation, to get our money back, I don't know that that is provided for, sir.

Senator **Pryor**. Well, I wish Senator Grassley were here. About 3 or 4 years ago we dealt with an amendment on warranties, and every time we think we have made a little progress in this area we find out that there has been a way to get around it. I hope that you and your staff will pursue this. I think you ought to send a letter to the prime contractors and say, look, if this ASPJ doesn't work, we want our money back.

What's wrong with that?

Secretary GARRETT. I don't know that there is anything wrong with it, sir.

Senator PRYOR. Well, I hope you will consider doing it.

Secretary GARRETT. I will consider doing it.

Senator PRYOR. Mr. Welch, what are you all going to do in the Air Force now about your jamming system? What are you doing?

Mr. WELCH. I think Mr. Atwood covered that really well in his testimony. We do have a backup. It is not as satisfactory. It does not do the job that an ASPJ would do. We are going to continue along that road, however, recognizing that we have at this time, essentially two-thirds of the necessary pods that we can spread around amongst our programs. We're also keeping in mind that our force structure is coming down at quite a rapid rate over the time period of the 1990s.

Senator PRYOR. Secretary Garrett, what about the IG report which finds that the Navy Acquisition Board ordered inaccurate and misleading ASPJ test results be presented to do C3I Systems Board? Do you have a comment on that?

Secretary GARRETT. Yes, sir, I do, Mr. Chairman. First, let me say that I have the greatest respect for the Inspector General. We usually have an ongoing dialogue and have had for the 4 years that I have been in the Department of Defense. From time to time we disagree.

In this case, I disagree with the conclusion that has been made. I was, as was pointed out earlier, the Acquisition Executive at the time that this was presented to the Navy Program Decision Board. The OPTEVFOR representatives made their presentation to me in the presence of all of the Navy senior staff, who also make recommendations to me.

The issue of the findings of the testers was thoroughly vetted, as we say. It was thoroughly discussed, along with many, many other issues. This was not, Mr. Chairman, an easy Navy Program Decision Meeting which we conducted before I made the recommendation to go to the Defense Acquisition Board. Let me tell you what the Admiral who was in charge of Navy's Operational Test and Evaluation Force which is the Navy's independent testing arm that provided the recommendation, said after he briefed, or his people briefed, the Acquisition Review Board within the Navy acquisition structure. This board is one level below the Navy program decision meeting which I chaired. The Commander Operational Test and Evaluation Force stated that Commander Naval Air Systems Command, that was Admiral Wilkinson at the time (a highly respected Naval officer, a combat decorated pilot) had no influence on the ASPJ test results, conclusions or recommendations, nor the manner in which this data was presented to the Navy Program Decision Meeting. That was the meeting that I chaired.

Senator PRYOR. Was that on the May 12, 1989?

Secretary GARRETT. Yes, sir, that is the one that they were referring to earlier. Admiral Webster was responsible for the conduct and management of that organization. I have a great deal of respect for him and that is his position. I can tell you, as the decision-maker, I certainly didn't feel that the issue was obfuscated. It wasn't a malleable issue. It was presented in a thorough manner. As I conduct those meetings, we thoroughly discuss all aspects of testing, and had he not made a recommendation to go forward with the low rate initial production, in all likelihood I would not have made a recommendation to go down to the Defense Acquisition Board.

Senator PRYOR. Once again let's return to that memo from the Commander, Naval Air Systems Command, signed, J. B. Wilkinson on page 54 on the IG report. It says, "It is also recommended that the positive test results be stressed."

Now, tell me what that signal says.

Secretary GARRETT. I think that signal says that human nature is human nature, but we discussed also the negative aspects of the testing. I was certainly aware of them.

Oftentimes, Mr. Chairman, we are involved in these rather lengthy meetings, they take 2 and 3 hours, sometimes a half a day. I think what he was probably trying to do was to ensure that I—and all of the participants at the table—received a thorough briefing but not an overly technical briefing. I am convinced that not only at the Navy Program Decision Meeting, but also at the Defense Acquisition Board, just as Mr. Vander Schaaf testified, the principals in my meeting, the principals in the Defense Acquisition Board, were fully apprised of where we were in this program.

Senator PRYOR. You said you tested 8,000 hours?

Secretary GARRETT. I think it is 8,600 hours so far.

Senator PRYOR. Over how many years?

Secretary GARRETT. Please let me ask my staff. When did we start the testing?

We started testing in 1983, sir. So that's to date.

Senator PRYOR. After you have tested something 8,000 hours, isn't that about enough time to test something?

Secretary GARRETT. Well, you were testing not the production items, sir, you were testing items that were produced in the full scale engineering development process. Let me, if I may, cite an example. We don't live without risk, and I do not want to leave this hearing leaving you with the conclusion that the Secretary of the Navy doesn't think there is any risk in this program, because there is risk in this program, just as there is in every program.

I weighed what I considered the pluses and minuses and came down on the side that the risks were manageable fixes for the deficiencies that were identified as they tested the full scale engineering development models have been incorporated into the production verification models. The testing to date is going very well. I am very buoyed in the sense that I think we have made the right decision. I have not been disappointed thus far, and I have to tell you, Mr. Chairman, I am very much involved in this program, as you can probably appreciate.

But I want to stress for you once again that if we get through the low rate initial production, the 100 units in the low rate initial production requests that is before you in the Congress today, and we don't meet the specifications and we don't have a system that is safe and that functions, I will terminate the program.

Senator PRYOR. Mr. Secretary, that's a fine statement. The problem is, and I can't seem to get this point across, we are going to spend at least $1 billion before we have completed our tests.

Secretary GARRETT. We have already spent $500 million in research and development. I was still out in the fleet when this program started. And I have played the game with the cards I have been dealt. My position was, after evaluating all of the data that was provided me, after listening to all of the arguments, again, I did not think it made sense to walk off the playing field with 5 minutes left in the game and go find a new game with all of the attendant costs that would be involved in that.

As you pointed out this morning, I think we are all in agreement that we do need capable, effective radar jamming equipment. Now, we are almost there. As was pointed out, and it was a valid point relative to the aircraft, we have produced I think $20 billion worth of airplanes that are awaiting this equipment. If in fact I were to kill this program, I would have to go back, modify those airplanes, create a son of ASPJ with all of the attendant costs. So we balance the risk, and in my conclusion the risk was worth taking.

Senator PRYOR. I think your friends in the Air Force are about to create the son of ASPJ. I am not certain, and I don't want to ask the Secretary to comment on that in public.

Let me just conclude by saying I truly think the Secretary of Defense should put a hold on this program. I don't think you need that $173 million. I, myself, will have to oppose that request on the Senate floor. I must say that I think the mentality of buy now and test later is working on this particular system.

I went through a lot of hearings on the DIVAD. I heard many similar arguments on that, you know, that we are going to correct this gun and it is going to shoot straight. It never did and finally it was canceled. It is awful hard to cancel these programs once we start, but every once in a while we have to say the cost/benefit ratio is not there.

Secretary GARRETT. Mr. Chairman, I have found that sometimes in the time that I have been the Acquisition Executive, it is sometimes hard to kill programs even when they haven't started. But I have taken that position and I have committed to the Secretary of Defense and to Secretary Atwood that that would be my position, and that will be my position. I am sorry that I am not able to convince you, because I think if we do not initiate the second lot of low rate initial production we may de facto terminate the program after this investment and after being this close to success.

Senator PRYOR. Well, once again, we want to thank the both of you for appearing this morning. This has been a very educational hearing for me. I want to apologize for my lack of knowledge about the chain of command and some of the technical aspects that our witnesses discussed. We have had a splendid group of witnesses.

We thank you, and our meeting is now concluded.

[Whereupon, at 12:10 p.m., the Subcommittee adjourned subject to the call of the Chair.]

APPENDIX

STATEMENT

OF

THE HONORABLE DONALD J. ATWOOD
DEPUTY SECRETARY OF DEFENSE

BEFORE THE

SENATE
COMMITTEE ON GOVERNMENTAL AFFAIRS
SUBCOMMITTEE ON FEDERAL SERVICES

ON THE

AIRBORNE SELF-PROTECTION JAMMER PROGRAM

MAY 11, 1990

MR. CHAIRMAN AND MEMBERS OF THE COMMITTEE:

I AM PLEASED TO HAVE THE OPPORTUNITY TO PRESENT MY VIEWS THIS MORNING ON THE AIRBORNE SELF-PROTECTION JAMMER, OR ASPJ, PROGRAM. MY REMARKS WILL FOCUS ON HOW WE ARRIVED AT THE DECISION TO PROCEED TO LOW RATE PRODUCTION LAST YEAR AND WHERE WE ARE GOING WITH THE PROGRAM TODAY.

AS YOU ARE ALL WELL AWARE, MY DECISION TO AUTHORIZE LOW RATE PRODUCTION OF ASPJ WAS NOT AN EASY ONE. THE PROGRAM HAD BEEN IN DEVELOPMENT FOR 13 YEARS AND THE DEPARTMENT HAD INVESTED OVER $500 MILLION IN RESEARCH AND DEVELOPMENT AND $208 MILLION FOR PRODUCTION VERIFICATION UNITS AND WE STILL HAD SERIOUS DEFICIENCIES IN OPERATIONAL EFFECTIVENESS AND RELIABILITY.

LAST JULY, WHEN PRESENTED WITH THE RESULTS OF OUR LATEST PERFORMANCE AND RELIABILITY TESTS, I WAS PREPARED TO CANCEL THE PROGRAM. HOWEVER, GIVEN THE URGENT OPERATIONAL NEED FOR A SELF-CONTAINED DEFENSIVE JAMMING SYSTEM FOR OUR FIGHTER AND ATTACK AIRCRAFT AND THE ABSENCE OF AN EFFECTIVE ALTERNATIVE TO MEET THE NEED; AND, AFTER FURTHER REVIEW OF IDENTIFIED SYSTEM DEFICIENCIES AND CORRECTIONS WHICH HAD BEEN INCORPORATED INTO PRODUCTION MODELS, I WAS PERSUADED THAT THE PROGRAM SHOULD BE PERMITTED TO CONTINUE.

MY DECISION WAS TO AUTHORIZE AWARD OF THE INITIAL LOW RATE PRODUCTION CONTRACTS, REFERRED TO AS LOT 1, BUT WITH THE UNDERSTANDING THAT CONTINUATION OF THE PROGRAM AND AUTHORIZATION FOR AWARD OF FURTHER LOW RATE PRODUCTION CONTRACTS, REFERRED TO AS LOTS 2 AND 3, WOULD BE PERMITTED ONLY AFTER THE SYSTEM DEMONSTRATES REQUIRED PERFORMANCE AND RELIABILITY.

LAST FALL, I ALSO DIRECTED THAT FIRM EXIT CRITERIA BE ESTABLISHED TO MEASURE SYSTEM PERFORMANCE AND RELIABILITY. IN THE PROCESS OF ESTABLISHING THESE EXIT CRITERIA TO SUPPORT A LOT 2 DEFENSE ACQUISITION BOARD REVIEW, JOHN BETTI AND I HAVE CONCLUDED THAT BY DELAYING THE LOT 2 DECISION UNTIL FEBRUARY 1991, WE WOULD SUBSTANTIALLY INCREASE THE TECHNICAL INFORMATION AVAILABLE TO SUPPORT THE DECISION WITHOUT ADVERSELY IMPACTING THE PROGRAM.

ACCORDINGLY, WE HAVE DIRECTED THAT THE DAB CONSIDERATION OF AWARD OF LOT 2 BE RESCHEDULED FOLLOWING COMPLETION OF SELECTED ELECTRICAL PERFORMANCE, ENVIRONMENTAL QUALIFICATION, AND RELIABILITY GROWTH TESTS. THIS SHOULD OCCUR IN FEBRUARY 1991. THE PROGRAM WILL NOT PROCEED IF THE PRODUCTION VERIFICATION SYSTEMS DO NOT SUCCESSFULLY MEET THE ESTABLISHED EXIT CRITERIA.

IN ADDITION TO RESCHEDULING THE LOT 2 DECISION, WE HAVE ASKED THE NAVY TO EXAMINE STRETCHING LOT 1 PROCUREMENT.

FURTHER, AIR FORCE WITHDRAWAL FROM THE PROGRAM FOR REASONS OF AFFORDABILITY WILL REDUCE THE LOT 2 QUANTITY FROM 155 TO 46 UNITS. WE HAVE ALSO POSTPONED THE LOT 3 DAB REVIEW, WHICH WAS TO BE HELD IN THE FALL OF 1991, UNTIL AFTER THE COMPLETION OF OPERATIONAL TESTING. LOT 3 WOULD BECOME PART OF FULL RATE PRODUCTION AND THE DAB WILL LIKELY OCCUR IN MID-1992.

AGAIN, IF THE ASPJ DOES NOT MEET THE EXIT CRITERIA TO FULLY DEMONSTRATE OPERATIONAL PERFORMANCE AND RELIABILITY, WE WILL NOT AUTHORIZE THE PROGRAM TO PROCEED INTO FULL RATE PRODUCTION.

I CANNOT SAY THE PROGRAM IS WITHOUT RISK. IT REMAINS A TECHNICAL AS WELL AS A MANAGEMENT CHALLENGE. HOWEVER, I BELIEVE THE ACQUISITION APPROACH I HAVE OUTLINED TODAY MINIMIZES RISK TO THE DEPARTMENT AND TO THE TAX PAYERS AND IS RESPONSIVE TO BOTH THE COMMITTEE'S CONCERNS AND THE NEEDS OF OUR NAVY AVIATORS WHO WILL HAVE TO RELY ON THIS SYSTEM FOR PROTECTION.

MR. CHAIRMAN, THAT CONCLUDES MY STATEMENT. I HOPE THAT I HAVE ADDRESSED YOUR CONCERNS AND WOULD BE PLEASED TO ANSWER ANY FURTHER QUESTIONS YOU MAY HAVE AT THIS TIME.

STATEMENT BY

DEREK J. VANDER SCHAAF, DEPUTY INSPECTOR GENERAL

DEPARTMENT OF DEFENSE

BEFORE THE

SUBCOMMITTEE ON FEDERAL SERVICES, POST OFFICE AND CIVIL SERVICE

COMMITTEE ON GOVERNMENTAL AFFAIRS

U.S. SENATE

ON THE

AIRBORNE SELF-PROTECTION JAMMER PROGRAM

MR. CHAIRMAN AND MEMBERS OF THE COMMITTEE:

I AM PLEASED TO BE HERE TODAY TO CONTRIBUTE TO YOUR REVIEW OF DOD'S, AIRBORNE SELF-PROTECTION JAMMER PROGRAM (THE PROGRAM). AS YOU KNOW, WE HAVE JUST COMPLETED AN AUDIT OF THE ASPJ PROGRAM. WE IDENTIFIED THREE MAJOR ISSUES REQUIRING MANAGEMENT ATTENTION:

- THE INHERENT COST RISK IN THE NAVY'S PLAN TO BUY ASPJ'S BEFORE OPERATIONAL TESTS CONFIRM THE SYSTEM WILL WORK IN A COMBAT ENVIRONMENT,

- THE REASONABLENESS OF THE ESTIMATED COST OF THE PROGRAM, AND

- THE COMPLETENESS AND ACCURACY OF INDEPENDENT TEST RESULTS PRESENTED TO DECISIONMAKERS.

BEFORE PROVIDING YOU DETAILS ON THESE ISSUES, I WILL PROVIDE SOME BACKGROUND ON THE PROGRAM.

BACKGROUND

THE ASPJ PROGRAM WAS ESTABLISHED TO PROVIDE A COMMON DEFENSIVE ELECTRONIC COUNTERMEASURES SYSTEM FOR OVER 2,000 NAVY AND AIR FORCE TACTICAL AIRCRAFT, STARTING IN THE LATE 1980'S AND EXTENDING INTO THE 21ST CENTURY. AS A RADIO FREQUENCY JAMMER, THE ASPJ WAS DESIGNED TO INCREASE COMBAT SURVIVABILITY OF U.S.

AIRCRAFT BY JAMMING OR DECEIVING RADAR-CONTROLLED WEAPONS OF THE ENEMY SO THE TRUE LOCATION OF THE U.S. AIRCRAFT IS UNKNOWN TO THE ENEMY.

THE NAVY HAS BEEN THE LEAD FOR MOST OF THE 14-YEAR EXISTENCE OF THE PROGRAM. THE COMMAND, CONTROL, COMMUNICATIONS AND INTELLIGENCE SYSTEMS COMMITTEE OF THE DEFENSE ACQUISITION BOARD IS THE FOCAL POINT FOR OVERSIGHT OF THE PROGRAM.

IN AUGUST 1989, THE ASPJ PROGRAM PROVIDED FOR 2,303 ASPJ'S, INCLUDING 1,509 ASPJ'S FOR THE AIR FORCE AND 794 ASPJ'S FOR THE NAVY. AT THAT TIME, THE ESTIMATED LIFE-CYCLE COST OF THE ASPJ PROGRAM WAS BETWEEN $7.3 BILLION AND $8.9 BILLION. IN DECEMBER 1989, THE AIR FORCE WITHDREW FROM THE PROGRAM. THE NAVY HAD NOT ESTIMATED THE COST OF THE REDUCED PROGRAM AT THE TIME WE COMPLETED OUR AUDIT IN MARCH.

AUDIT COVERAGE

OUR AUDIT RESPONDED TO A DOD HOTLINE COMPLAINT THAT QUESTIONED THE DEPUTY SECRETARY OF DEFENSE APPROVAL FOR THE NAVY TO BUY 104 ASPJ PRODUCTION UNITS, COSTING OVER $400 MILLION, WHILE AT THE SAME TIME 20 PRODUCTION VALIDATION UNITS WERE ON ORDER AND COULD BE USED FOR OPERATIONAL TESTING. THE COMPLAINANT ALLEGED THAT THE DEPUTY SECRETARY, WHEN GRANTING THE APPROVAL, IGNORED INFORMATION THAT SHOWED ASPJ UNITS DID NOT MEET OPERATIONAL EFFECTIVENESS AND SUITABILITY REQUIREMENTS AND

IGNORED INFORMATION THAT SHOWED THE COST OF THE PROGRAM WAS UNDERSTATED BY $1.6 BILLION. DURING THE AUDIT, WE RECEIVED A SUPPLEMENTAL HOTLINE COMPLAINT, QUESTIONING:

- THE RELIABILITY OF TESTED ASPJ UNITS,

- THE NUMBER OF ASPJ'S THE NAVY PLANS TO BUY BEFORE DETERMINING WHETHER THE SYSTEMS WILL BE EFFECTIVE AND SUITABLE FOR COMBAT USE,

- THE REASONABLENESS OF THE ESTIMATED COST OF THE PROGRAM,

- THE ACCURACY OF TEST RESULTS BRIEFED TO DEFENSE DECISIONMAKERS, AND

- THE PROGRAM OFFICE'S CRITICISM OF THE CRITERIA USED TO CONDUCT OPERATIONAL TESTS.

THE PRIMARY OBJECTIVES OF THE AUDIT WERE TO DETERMINE IF THE HOTLINE ALLEGATIONS WERE VALID AND IF ANY OF THE ALLEGATIONS WARRANTED FURTHER MANAGEMENT ATTENTION.

SUGGESTIONS ADVANCED TO THE SECRETARY OF THE NAVY DURING THE AUDIT

ON TWO SEPARATE OCCASIONS DURING OUR AUDIT, WE SENT CORRESPONDENCE TO THE NAVY SUGGESTING THAT THE SECRETARY OF THE NAVY CONSIDER ACTIONS THAT COULD REDUCE THE 100 ASPJ'S BOUGHT ON THE LOT 1 PRODUCTION CONTRACTS. ON OCTOBER 23, 1989, SHORTLY AFTER THE CONTRACTS WERE AWARDED, I SIGNED A LETTER TO THE SECRETARY OF THE NAVY RECOMMENDING THAT THE NUMBER OF ASPJ'S ON THE CONTRACTS BE REDUCED. IN A JANUARY 25, 1990 MEMORANDUM, THE INSPECTOR GENERAL, DOD, RECOMMENDED THAT THE SECRETARY OF THE NAVY DETERMINE WHETHER IT WOULD BE COST BENEFICIAL TO STOP WORK ON THE CONTRACTS FOR A SHORT TIME TO DECIDE THE DISPOSITION OF THE AIR FORCE FUNDED ASPJ'S.

THE SECRETARY OF THE NAVY DECIDED IN BOTH CASES TO PROCEED WITH THE CONTRACTS AS PLANNED.

OVERALL AUDIT RESULTS

OUR AUDIT CONCLUDED THAT THE PRIMARY ALLEGATION WAS INVALID. DOCUMENTS SHOWED THAT THE DEPUTY SECRETARY OF DEFENSE WAS WELL AWARE OF THE TEST RESULTS AND OF CONCERNS ABOUT THE ACCURACY OF COST DATA, AND THE DEPUTY SECRETARY CONSIDERED THOSE MATTERS BEFORE MAKING A DECISION TO BUY 100 ASPJ'S. THE DEPUTY SECRETARY AUTHORIZED THE AWARD OF THE LOT 1 PRODUCTION CONTRACTS MAINLY BECAUSE THE NAVY INFORMED HIM THAT, IF THAT ACTION WAS NOT TAKEN, THE VENDOR BASE FOR ASPJ'S WOULD DRY UP, AND THAT THE NAVY AND

AIR FORCE WOULD HAVE 1,000 AIRCRAFT WITHOUT ASPJ'S IF THE CONTRACTS WERE NOT AWARDED.

WE FOUND THAT THE OTHER ALLEGATIONS WERE VALID:

- THE ASPJ'S EFFECTIVENESS AND SUITABILITY IN COMBAT HAS NOT BEEN PROVEN.

- THE NAVY ACQUISITION PLAN PROVIDED FOR THE PURCHASE OF TOO MANY ASPJ'S BEFORE PROVING MILITARY WORTH;

- THE ASPJ LIFE-CYCLE COSTS MAY BE UNDERSTATED BY $1.6 BILLION; AND

- THE TEST RESULTS THAT WERE BRIEFED TO DECISIONMAKERS WERE INACCURATE.

EFFECTIVENESS AND SUITABILITY OF THE ASPJ FOR USE IN COMBAT

THE NAVY AND AIR FORCE CONDUCTED THREE INITIAL OPERATIONAL TESTS OF ASPJ'S. THE PRIMARY PURPOSE OF THOSE TESTS WAS TO DETERMINE ASPJ OPERATIONAL EFFECTIVENESS AND SUITABILITY IN A COMBAT ENVIRONMENT.

NONE OF THE THREE TESTS CONFIRMED THE EFFECTIVENESS AND SUITABILITY OF ASPJ'S. I AM UNABLE TO DISCUSS THE DETAILED TEST RESULTS IN THIS OPEN HEARING BECAUSE THE RESULTS ARE

CLASSIFIED. HOWEVER, I CAN SAY THAT THE NEXT OPERATIONAL TEST AND EVALUATION IS NOT SCHEDULED TO BE COMPLETED UNTIL SEPTEMBER 1991.

ACQUISITION PLAN FOR THE ASPJ PROGRAM

ALTHOUGH THE ASPJ HAS NOT DEMONSTRATED ITS MILITARY WORTH, THE NAVY CONTINUES TO BUY ASPJ'S AS ORIGINALLY PLANNED. AS I MENTIONED PREVIOUSLY, THE NAVY'S ACQUISITION PLAN PROVIDED FOR THE NAVY TO BUY 2,303 PRODUCTION ASPJ'S OVER A 10-YEAR PERIOD. 436 OF THESE UNITS WERE TO BE BOUGHT BEFORE OPERATIONAL TEST AND EVALUATION WAS COMPLETED.

WHEN OUR AUDIT STARTED, THE NAVY HAD ALREADY BOUGHT 20 PRODUCTION VERIFICATION ASPJ'S. THE NAVY PLANNED TO BUY 104 MORE ASPJ'S IN FY 1989, 155 IN FY 1990, AND 157 IN FY 1991 FOR A TOTAL OF 436 BEFORE OPERATIONAL TEST AND EVALUATION WAS COMPLETED. ON OCTOBER 6, 1989, THE NAVY CONTRACTED FOR 100 OF THE 104 ASPJ'S PLANNED FOR PURCHASE IN FY 1989 BUT HAD TO REVISE ITS PLANS FOR FUTURE BUYS BECAUSE THE CONGRESS DID NOT AUTHORIZE FUNDS TO BUY THE 155 ASPJ'S PLANNED FOR FY 1990 AND BECAUSE THE AIR FORCE WITHDREW FROM THE ASPJ PROGRAM IN DECEMBER 1989. THE AIR FORCE WITHDRAWAL REDUCED THE ASPJ PROGRAM BY TWO THIRDS (FROM 2,303 ASPJ'S TO 794 ASPJ'S).

AT THE END OF OUR AUDIT, THE NAVY HAD NOT REVISED ITS ACQUISITION PLAN; HOWEVER, WE WERE INFORMED THAT THE NAVY PLANNED

TO NEGOTIATE TWO MORE PRODUCTION LOTS BEFORE COMPLETION OF OPERATIONAL TEST AND EVALUATION.

NAVY'S REASONS FOR CONTINUING TO BUY ASPJ'S

THE NAVY CHOSE NOT TO INTERRUPT ITS ACQUISITION PLAN BECAUSE IT WAS CONCERNED THAT THE VENDOR BASE FOR ASPJ PRODUCTION WOULD DRY UP IF THERE WAS A BREAK IN ASPJ PRODUCTION. ALSO, THE NAVY CLAIMED THAT 1,000 AIRCRAFT WOULD BE WITHOUT ASPJ UNITS IF THERE WAS A BREAK IN PRODUCTION.

WE FOUND THAT THE NAVY OVERSTATED THE POTENTIAL OF THE VENDOR BASE DRYING UP. DATA ON THE 2 PRIME CONTRACTORS FOR THE ASPJ'S AND 15 OF THEIR CRITICAL VENDORS SHOWED THAT A BREAK IN PRODUCTION WOULD NOT CAUSE THE VENDOR BASE TO DRY UP. I AM UNABLE TO PROVIDE YOU DETAILS IN THIS OPEN HEARING ON CONTRACTOR AND VENDOR DEPENDENCE ON ASPJ SALES BECAUSE THE INFORMATION IS PROPRIETARY.

THE NAVY CLAIM THAT 1,000 AIRCRAFT WOULD BE WITHOUT ASPJ'S WAS FACTUALLY ACCURATE BUT MISLEADING BECAUSE IT INFERRED THAT THERE WAS A REQUIREMENT FOR 1,000 ASPJ'S AND THAT LOT 1 PRODUCTION WAS NECESSARY TO HELP SATISFY THAT REQUIREMENT. PROGRAM OFFICE REQUIREMENTS SHOWED THAT ONLY 668 ASPJ'S WERE NEEDED TO SUPPORT THE 1,000 AIRCRAFT BECAUSE PLANNED OPERATIONAL USE DID NOT REQUIRE A ONE FOR ONE RELATIONSHIP. ALSO, WE FOUND THAT LOT 1 PRODUCTION WOULD NOT REDUCE THE CONTINUING REQUIREMENT

FOR ASPJ'S. EVEN WITH NO BREAK IN PRODUCTION AND WITH THE NAVY BUYING THE QUANTITIES IN ITS ACQUISITION PLAN, THERE STILL WOULD BE A CONTINUING REQUIREMENT FOR 700 ASPJ UNITS. THE CONTINUING REQUIREMENT FOR ASPJ UNITS WOULD NOT DECREASE BECAUSE THE RATE OF ASPJ PRODUCTION IS NOT GREATER THAN THE PLANNED PRODUCTION RATE FOR THE AIRCRAFT USING THE ASPJ'S. FINALLY, THE CLAIM DID NOT ADDRESS THE AVAILABILITY OF ALTERNATE JAMMER SYSTEMS. WE DETERMINED THAT PROVEN JAMMING SYSTEMS COULD BE USED TO SATISFY 638 OF THE 668 ASPJ REQUIREMENTS. THE OTHER 30 ASPJ REQUIREMENTS WERE FOR F-14D AIRCRAFT WHICH HAD ACCESS TO STANDOFF JAMMING PROTECTION AND WERE EQUIPPED WITH A RADAR WARNING RECEIVER. OPERATIONAL TEST DATA COMPILED TO DATE INDICATE THAT THE ASPJ REPRESENTS ONLY A MODEST ADVANCE IN CAPABILITY OVER ALTERNATE, LESS COSTLY JAMMING DEVICES.

COST RISK ASSOCIATED WITH THE NAVY'S ACQUISITION PLAN

THE NAVY PLAN TO CONTINUE BUYING ASPJ'S BEFORE COMPLETION OF OPERATIONAL TESTS EXPOSED DOD TO UNNECESSARY COST RISKS AND DEPLOYMENT DELAYS. WE WERE UNABLE TO SPECIFY HOW MUCH COST RISK THE DOD WOULD BE EXPOSED TO BECAUSE OF THE AIR FORCE'S WITHDRAWAL FROM THE PROGRAM, AND BECAUSE THE ASPJ PROGRAM OFFICE HAD NOT REVISED ITS ACQUISITION PLAN AT THE TIME WE FINISHED THE AUDIT. HOWEVER, WE CONSERVATIVELY ESTIMATE THAT THE NAVY CURRENTLY PLANS TO COMMIT $1.0 BILLION ON PRODUCTION CONTRACTS BEFORE OPERATIONAL TESTS ARE COMPLETED. OUR AUDIT SHOWS THAT $668 MILLION OF THE $1.0 BILLION IS ALREADY ON CONTRACTS.

CONSIDERING THE ASPJ'S POOR OPERATIONAL TEST RESULTS, WE BELIEVE IT WOULD BE PRUDENT TO LIMIT PRODUCTION TO THE PRODUCTION VERIFICATION UNITS UNTIL AFTER OPERATIONAL TEST RESULTS SHOW THAT THE ASPJ IS OPERATIONALLY EFFECTIVE AND SUITABLE FOR COMBAT AND STRETCH OUT DELIVERY OF THE 100 UNITS ORDERED LAST OCTOBER.

SINCE A BREAK IN PRODUCTION COULD HAVE A SIGNIFICANT IMPACT ON THE PROGRAM, THE NAVY SHOULD NEGOTIATE A STRETCH OUT OF THE 100 UNITS PLACED ON CONTRACT LAST OCTOBER. DELIVERIES OF THESE UNITS SHOULD BE STRETCHED OUT FOR ONE ADDITIONAL YEAR. ALTHOUGH THIS DELAY WILL INCREASE UNIT PRICES FOR ASPJ'S, WE BELIEVE PAYING THE INCREASED PRICES WOULD BE PREFERABLE TO BUYING ADDITIONAL ASPJ UNITS WITH NO ASSURANCE THAT SUCH UNITS WILL BE OPERATIONALLY EFFECTIVE AND SUITABLE FOR COMBAT.

ESTIMATED COST OF THE ASPJ PROGRAM

THE ESTIMATED COST OF THE PROGRAM MAY BE SIGNIFICANTLY UNDERSTATED. BEFORE THE AIR FORCE WITHDREW FROM THE PROGRAM ON DECEMBER 11, 1989, THE DOD'S COST ANALYSIS AND IMPROVEMENT GROUP (CAIG) ASSESSED THE PROGRAM COST ESTIMATE AND CONCLUDED THAT IT MAY BE UNDERSTATED BY AS MUCH AS $1.6 BILLION OR ABOUT 22 PERCENT MORE THAN THE PROGRAM OFFICE COST ESTIMATE OF $7.3 BILLION. ALTHOUGH THE AIR FORCE WITHDRAWAL FROM THE PROGRAM WILL REDUCE THE TOTAL PROGRAM COST, WE BELIEVE THAT ESTIMATED PROGRAM COSTS MAY STILL BE UNDERSTATED. FOR EXAMPLE, TWO OF THE MORE

SIGNIFICANT AREAS THE CAIG QUESTIONED WERE THE ESTIMATED SAVINGS FROM DUAL SOURCING ASPJ ACQUISITIONS, A DIFFERENCE OF $500 MILLION, AND THE CONDEMNATION RATES FOR TRAVELING WAVE TUBES, A DIFFERENCE OF $300 MILLION TO $600 MILLION. BOTH OF THOSE AREAS NEED TO BE ADDRESSED BECAUSE THEY ARE STILL APPLICABLE TO THE REDUCED PROGRAM.

ON AUGUST 16, 1989, THE DEPUTY SECRETARY OF DEFENSE DIRECTED THAT THE OPEN COST ISSUES BE RESOLVED WITH THE CAIG BY THE NEXT SCHEDULED MILESTONE DATE, OCTOBER 1, 1990.

AT THE END OF OUR AUDIT, LITTLE ACTION HAD BEEN TAKEN TO RESOLVE THE DIFFERENCES. WE BELIEVE THAT THE NAVY SHOULD HAVE PLACED GREATER EMPHASIS ON IMMEDIATELY RESOLVING COST DIFFERENCES TO AVOID CRITICISM OF DOD'S COST ESTIMATING METHODOLOGY AND TO ACHIEVE REALISTIC BUDGETARY REQUIREMENTS.

OPERATIONAL TEST RESULTS PRESENTED TO ACQUISITION DECISIONMAKERS

THE RESULTS OF OPERATIONAL TESTS THAT WERE PRESENTED TO DOD ACQUISITION DECISIONMAKERS WERE INCOMPLETE AND MISLEADING. IN A MAY 1989 PRESENTATION TO THE COMMAND, CONTROL, COMMUNICATIONS AND INTELLIGENCE SYSTEMS COMMITTEE, THE NAVY OPERATIONAL TESTER (NAVY OPERATIONAL TEST AND EVALUATION FORCE) DID NOT IDENTIFY SIGNIFICANT TEST LIMITATIONS AND UNRESOLVED CRITICAL OPERATIONAL TEST ISSUES. INFORMATION PRESENTED TO THE SYSTEMS COMMITTEE WAS INCOMPLETE AND MISLEADING BECAUSE THE NAVY'S ASPJ ACQUISITION

REVIEW BOARD DIRECTED THE NAVY OPERATIONAL TESTER TO LIMIT THE TEST RESULTS THAT WERE BRIEFED TO THE COMMITTEE AND TO STRESS POSITIVE RESULTS TO THE COMMITTEE. WE BELIEVE THE BOARD DIRECTED THOSE ACTIONS BECAUSE THE COMPLETE TEST RESULTS DID NOT CLEARLY SUPPORT A PRODUCTION RECOMMENDATION. ALSO, THE SYSTEMS COMMITTEE'S MINUTES THAT WERE PROVIDED TO THE DEFENSE ACQUISITION BOARD DID NOT ACCURATELY SUMMARIZE THE OPERATIONAL TESTER'S PRESENTATION. ACCORDING TO THE MINUTES, THE NAVY OPERATIONAL TESTER STATED THAT:

> "ASPJ SATISFIED MOST OF THE TESTING REQUIREMENTS, THAT IT OFFERED SIGNIFICANT CAPABILITY IMPROVEMENTS OVER EXISTING SYSTEMS, AND THAT COMMANDER OPERATIONAL TEST AND EVALUATION FORCE FULLY SUPPORTED THE REQUESTED LOW-RATE INITIAL PRODUCTION DECISION."

WE LEARNED FROM THE NAVY OPERATIONAL TESTER AND FROM HIS BRIEFING MATERIALS THAT HE DID NOT ADVISE THE SYSTEMS COMMITTEE THAT THE ASPJ SATISFIED MOST OF THE TESTING REQUIREMENTS AND THAT THE COMMANDER OF THE NAVY OPERATIONAL TEST AND EVALUATION FORCE DID NOT FULLY ENDORSE ASPJ'S FOR PRODUCTION. WE ATTRIBUTED THE MISINFORMATION IN THE SYSTEMS COMMITTEE'S MINUTES TO FAILURE TO COORDINATE THE MINUTES WITH THE NAVY TESTER.

MR. CHAIRMAN, LET ME EMPHASIZE THAT THE PRINCIPALS OF THE DEFENSE ACQUISITION BOARD WERE FULLY AWARE OF THE OPERATIONAL TEST RESULTS DESPITE THE MISINFORMATION IN THE SYSTEMS COMMITTEE'S MINUTES. DOCUMENTATION THAT WE OBTAINED DURING THE AUDIT CLEARLY SHOWS THAT KEY PRINCIPALS WERE AWARE OF THE POOR TEST RESULTS. HOWEVER, WE REPORTED ON THIS CONDITION BECAUSE ACQUISITION OFFICIALS SHOULD NOT TRY TO INFLUENCE OPERATIONAL TESTERS FROM PRESENTING OBJECTIVE AND COMPLETE TEST RESULTS TO DECISIONMAKERS.

RECOMMENDATIONS MADE IN THE AUDIT

TO REDUCE THE COST RISK OF THE ASPJ PROGRAM, WE RECOMMENDED THAT THE UNDER SECRETARY OF DEFENSE FOR ACQUISITION DEFER FURTHER PRODUCTION DECISIONS ON THE PROGRAM UNTIL THE COMPLETION OF OPERATIONAL TEST AND EVALUATION. WE ALSO RECOMMENDED THAT THE COMMANDER, NAVAL AIR SYSTEMS COMMAND, RENEGOTIATE THE CURRENT LOT 1 CONTRACTS TO STRETCH OUT DELIVERIES OF THE 100 ASPJ UNITS TO PRECLUDE A BREAK IN PRODUCTION BEFORE COMPLETING OPERATIONAL TEST AND EVALUATION.

TO RESOLVE THE QUESTIONABLE COST ESTIMATE FOR THE ASPJ PROGRAM, WE RECOMMENDED THAT THE UNDER SECRETARY OF DEFENSE FOR ACQUISITION DIRECT THE PROGRAM OFFICE AND THE CAIG TO IMMEDIATELY IDENTIFY DIFFERING COST ESTIMATING ASSUMPTIONS, DEVELOP AN AGENDA FOR RESOLVING THE DIFFERENCES, AND RESOLVE THE DIFFERENCES BY AUGUST 1, 1990. WE ALSO RECOMMENDED THAT THE UNDER SECRETARY DIRECT THE CHAIRMAN OF THE C3I SYSTEMS COMMITTEE TO REVIEW, APPROVE AND MONITOR THE AGENDA FOR RESOLUTION OF THE COST ESTIMATING DIFFERENCES.

TO PREVENT RECURRENCES OF OFFICIALS INFLUENCING THE INDEPENDENCE OF OPERATIONAL TESTERS, WE RECOMMENDED THAT THE UNDER SECRETARY OF DEFENSE FOR ACQUISITION REEMPHASIZE TO ACQUISITION MANAGERS THE NECESSITY AND IMPORTANCE OF INDEPENDENT TEST AND EVALUATION EFFORTS AND DIRECT THE MANAGERS NOT TO INFLUENCE OR ATTEMPT TO INFLUENCE THE OBJECTIVITY AND COMPLETENESS OF TEST RESULTS PRESENTED TO DECISIONMAKERS. WE ALSO RECOMMENDED THAT HE ESTABLISH GUIDANCE THAT REQUIRES COORDINATION OF PROGRAM REVIEW MINUTES WITH OPERATIONAL TESTERS BEFORE THE MINUTES ARE PRESENTED TO THE DEFENSE ACQUISITION BOARD.

MANAGEMENT'S RESPONSE TO OUR DRAFT REPORT

OUR DRAFT REPORT RECOMMENDATIONS WERE ADDRESSED TO OSD AND THE NAVY. RESPONSES WERE NOT RECEIVED AT THE TIME WE PREPARED OUR FINAL REPORT. HOWEVER, DURING PREPARATION OF THIS STATEMENT, WE RECEIVED COMMENTS FROM OSD. THE OSD NONCONCURRED WITH ALL OUR RECOMMENDATIONS. HOWEVER, MUCH OF THEIR RESPONSE IS, IN FACT, RESPONSIVE TO THE RECOMMENDATIONS AND INFER THAT NECESSARY CORRECTIVE ACTIONS WILL BE TAKEN.

DEFERRING PRODUCTION

REGARDING OUR RECOMMENDATION TO DEFER PRODUCTION, THE OSD RESPONSE INDICATED IT WAS PREMATURE TO DECIDE WHETHER FURTHER ASPJ BUYS SHOULD BE DEFERRED UNTIL THE COMPLETION OF OPERATIONAL TEST AND EVALUATION. THE OSD RESPONSE SHOWED THAT THE PROGRAM WARRANTS AN ASSESSMENT BY THE DEFENSE ACQUISITION BOARD BEFORE MAKING THAT DECISION. WE HAVE NO OBJECTIONS TO SUCH AN ASSESSMENT BEING MADE AS LONG AS IT IS DONE TIMELY. ONCE THE CONTRACTORS ESTABLISH THEIR PRODUCTION CAPABILITIES, IT BECOMES MORE COSTLY TO STRETCH OUT DELIVERIES ON THE LOT 1 CONTRACTS.

PROGRAM COSTS

REGARDING THE MATTER OF RECONCILING PROGRAM COSTS, THE RESPONSE TO OUR DRAFT REPORT INDICATED THAT THE CAIG AND THE PROGRAM OFFICE HAD BEEN WORKING TO RESOLVE THE MATTER AND PRODUCE A REVISED COST ESTIMATE. OUR AUDIT DISCLOSED NO SUCH EFFORTS. WHILE WE APPLAUD THIS EFFORT, IT COMMENCED ONLY AFTER OUR AUDIT WAS NEARING COMPLETION.

TESTERS INDEPENDENCE

REGARDING THE INFLUENCING OF PRESENTATIONS OF TEST RESULTS, OSD MAINTAINED THAT PRESENTATIONS TO DECISIONMAKERS WERE NOT INCOMPLETE AND MISLEADING. HOWEVER, WE HAVE DOCUMENTATION SHOWING THAT CRITICAL INFORMATION WAS LEFT OUT OF THE INDEPENDENT

NAVY TESTER'S PRESENTATIONS. ALSO, WE HAVE MINUTES OF THE COMMAND, CONTROL, COMMUNICATIONS AND INTELLIGENCE SYSTEMS COMMITTEE'S REVIEW OF THE ASPJ PROGRAM SHOWING THAT THE NAVY INDEPENDENT TESTER'S OVERALL TEST CONCLUSIONS AND PRODUCTION RECOMMENDATION WERE PUT IN THE BEST POSSIBLE LIGHT BY EMPHASIZING THE POSITIVE RESULTS AND LARGELY IGNORING THE NEGATIVE RESULTS.

WE PLAN TO ASK MANAGEMENT TO RECONSIDER THEIR POSITIONS. IF DISAGREEMENTS OVER OUR RECOMMENDATIONS CAN NOT BE RESOLVED, WE HAVE THE OPTION OF ELEVATING THE ISSUE TO THE DEPUTY SECRETARY OF DEFENSE.

CONCLUDING REMARKS

MR. CHAIRMAN, THAT CONCLUDES MY STATEMENT. I WILL BE HAPPY TO ANSWER ANY QUESTIONS THAT YOU OR THE COMMITTEE MAY HAVE.

STATEMENT

OF

THE HONORABLE ROBERT C. DUNCAN
DIRECTOR, OPERATIONAL TEST AND EVALUATION

BEFORE THE

SENATE
COMMITTEE ON GOVERNMENTAL AFFAIRS
SUBCOMMITTEE ON FEDERAL SERVICES

MAY 11, 1990

I AM ROBERT C. DUNCAN, THE DIRECTOR OF OPERATIONAL TEST AND EVALUATION. THIS MORNING I WANT TO BRIEFLY OUTLINE THE STATUS OF PAST AND FUTURE OPERATIONAL TEST ACTIVITIES ASSOCIATED WITH THE AIRBORNE SELF PROTECTION JAMMER (ASPJ). AS YOU KNOW, THE ASPJ OR AN/ALQ-165 WAS OPERATIONALLY TESTED IN 1988 AND 1989. THIS OPERATIONAL TESTING WAS PLANNED TO PROVIDE A STEP-BY-STEP APPROACH TO THE TEST AND EVALUATION OF THE SYSTEM. AS SUCH, FOUR SERIES OF TESTS WERE TO BE PERFORMED. ALL FOUR SERIES OF OPERATIONAL TESTS WERE TO BE CONDUCTED WITH THE FULL SCALE DEVELOPMENTAL TEST ARTICLE OF THE ASPJ. THE FIRST THREE SERIES WERE TO DETERMINE THE CAPABILITIES OF THE SYSTEM EXCLUSIVE OF WEAPON SYSTEM INTEROPERABILITY. THESE FIRST THREE OPERATIONAL TEST SERIES FOCUSED ON ASPJ HARDWARE. SERIES ONE AND THREE WERE FLIGHT TESTS BUT WERE NOT CONDUCTED ON OPERATIONALLY CONFIGURED AIRCRAFT. THE SECOND SERIES OF TESTS WAS AT THE AIR FORCE'S ELECTRONIC WARFARE EVALUATION SIMULATOR IN FT. WORTH, TEXAS.

THE FOURTH SERIES OF TESTS WAS TO DETERMINE THE CAPABILITY OF THE SYSTEM TO OPERATE ON MISSION AIRCRAFT, BUT THESE TESTS WERE NOT PERFORMED. BOTH AIRCRAFT (F-18 AND F-16) WERE TO HAVE BEEN LOADED WITH OPERATIONAL WEAPONS SO WE COULD FLY AN OPERATIONALLY REALISTIC MISSION. HOWEVER, AT THE CONCLUSION OF THE THIRD SERIES OF TESTS, IT WAS OBVIOUS THAT SUBSTANTIAL CHANGES WERE REQUIRED TO THE ASPJ SYSTEM. IN ADDITION, THE TEST ARTICLE IN ITS THEN CURRENT CONFIGURATION WAS NO LONGER CONSIDERED TO BE REPRESENTATIVE OF PRODUCTION UNITS. THEREFORE, THE FOURTH SERIES OF TESTS WAS CANCELLED. SINCE THE CANCELLATION, NO ADDITIONAL OPERATIONAL TEST AND EVALUATION OF THE ASPJ HAS BEEN APPROVED.

THE RESULTS OF THESE TESTS WERE PRESENTED BY THE SERVICE OPERATIONAL TEST AGENCIES IN THEIR FINAL REPORTS. OVERALL, THE SYSTEM AS TESTED WAS REPORTED AS MARGINALLY EFFECTIVE AND MARGINALLY SUITABLE. I CONCUR WITH THIS ANALYSIS.

THE TESTS IDENTIFIED DEFICIENCIES THAT REQUIRED WHAT I BELIEVE ARE SUBSTANTIAL CHANGES TO THE SYSTEM. THEY ALSO IDENTIFIED THE NECESSITY TO DEVELOP BETTER EQUIPMENT TO FULLY EXPLOIT THE REPROGRAMMING CAPABILITIES OF THE JAMMER. DESIGN CHANGES TO CORRECT DEFICIENCIES ARE BEING INCORPORATED INTO THE PRODUCTION VERIFICATION (PV) UNITS AND THE LOT 1 LOW RATE INITIAL PRODUCTION (LRIP) UNITS. THE NAVY HAS ALSO CONTRACTED FOR AN IMPROVED PIECE OF EQUIPMENT CALLED THE USER DATA FILE GENERATOR WHICH WILL MORE FULLY EXPLOIT THE REPROGRAMMABLE CAPABILITIES OF THE ASPJ.

SOME QUESTIONS CONCERNING THE MEASURES OF EFFECTIVENESS AROSE DURING THE TEST APPROVAL PROCESS AND AGAIN AFTER THE TEST RESULTS WERE IN. THE ACQUISITION DECISION MEMORANDUM (ADM) ISSUED LAST SUMMER DIRECTED A REVIEW OF THESE MEASURES. A JOINT TASK FORCE OF NAVY AND AIR FORCE PERSONNEL HAS PROPOSED A DIFFERENT SET OF MEASURES OF EFFECTIVENESS.

THE 1989 ADM ALSO APPROVED THE PROCUREMENT OF LOT 1 LRIP ARTICLES. THE OPERATIONAL TEST COMMUNITY CONCURRED IN THIS ACTION WITH QUALIFICATIONS. THE MAIN QUALIFIER WAS THAT LRIP BE DEFINED AS LOT 1 ONLY PLUS PV UNITS. DOT&E ALSO RECOMMENDED THE SYSTEM NOT BE DEPLOYED UNTIL IT COULD BE SATISFACTORILY

OPERATIONALLY TESTED. THE ADM DIRECTED THE NAVY TO PROVIDE EXIT CRITERIA FOR PROCUREMENT OF LOT 2 AND LOT 3 UNITS. MY RECOMMENDATION ON THIS IS THAT NO ADDITIONAL PROCUREMENT SHOULD BE UNDERTAKEN UNTIL A PRODUCTION REPRESENTATIVE SYSTEM SUCCESSFULLY COMPLETES OPERATIONAL TESTS ON MISSION CONFIGURED AIRCRAFT. IN OTHER WORDS, I CONTINUE TO SUPPORT THE POSITION PREVIOUSLY TAKEN BY DOT&E: LRIP SHOULD BE LOT 1 PLUS PV UNITS ONLY.

TITLE 10, SECTION 2400 DEFINES LRIP AS "PRODUCTION OF THE SYSTEM IN THE MINIMUM QUANTITY NECESSARY--

> (1) TO PROVIDE PRODUCTION-CONFIGURED OR REPRESENTATIVE ARTICLES FOR OPERATIONAL TESTS PURSUANT TO SECTION 2399 OF THIS TITLE;
> (2) TO ESTABLISH AN INITIAL PRODUCTION BASE FOR THE SYSTEM; AND
> (3) TO PERMIT AN ORDERLY INCREASE IN THE PRODUCTION RATE FOR THE SYSTEM SUFFICIENT TO LEAD TO FULL-RATE PRODUCTION UPON THE SUCCESSFUL COMPLETION OF OPERATIONAL TESTING."

AS PARAGRAPHS 2 AND 3 OF SECTION 2400 STATE, CONSIDERATIONS OTHER THAN REQUIRED OPERATIONAL TEST ARTICLES PLAY A ROLE IN THE DETERMINATION OF LOW RATE INITIAL PRODUCTION QUANTITIES.

TURNING TO FUTURE OPERATIONAL TEST PLANNING, I HAVE RECENTLY RECEIVED AN UPDATED DRAFT TEST AND EVALUATION MASTER PLAN (TEMP) FOR THE ASPJ. I WILL CONTINUE TO WORK WITH THE NAVY TO ENSURE THAT FUTURE OT&E WILL DETERMINE THE OPERATIONAL EFFECTIVENESS AND SUITABILITY OF THE ASPJ WHEN EMPLOYED ON THE F/A-18C AIRCRAFT USING PRODUCTION REPRESENTATIVE TEST ARTICLES. ADDITIONAL TESTING (PRESENTLY SCHEDULED TO START IN SEPTEMBER 1991) WILL SERVE TO CONFIRM THE CORRECTION OF DEFICIENCIES NOTED FROM PREVIOUS TESTING. TEST RESULTS WILL SUPPORT A MILESTONE IIIB FULL RATE PRODUCTION DECISION.

THE FOLLOW-ON OPERATIONAL TEST AND EVALUATION IS SCHEDULED TO START IN SEPTEMBER 1992. THIS TEST WILL DETERMINE THE OPERATIONAL EFFECTIVENESS AND SUITABILITY OF THE AV-8B SUBSONIC POD AND SUPPORT FLEET INTRODUCTION OF THE SYSTEM ON THE AV-8B. TWO ADDITIONAL FOLLOW-ON TEST AND EVALUATIONS ARE ANTICIPATED WITH THE DATES TO BE DETERMINED.

THAT CONCLUDES MY PREPARED STATEMENT. I'D BE PLEASED TO ANSWER YOUR QUESTIONS.

RESPONSES TO WRITTEN QUESTIONS

Senator Roth: In your annual report you state that the ASPJ was rated marginally effective and marginally suitable by Navy's operational test and evaluation force. Will you please explain what this means in a way that laymen can understand? Does it mean that it can't do what it was expected to? Are there some radar systems that it can't detect, identify and jam? If it can't do what it was designed to do, doesn't it give the pilot a false sense of security and set the pilot up for a nasty surprise?

Dr. Duncan: The meaning of marginally effective or marginally suitable is specific to an individual weapon system. In general, a system so described may not perform all functions to the degree specified in the requirements documentation. It would exhibit one or both of the following characteristics: (a) provide a reasonable expectation that the required performance will be cost effectively achieved as the system matures, and (b) provide a meaningful improvement over existing operational capability.

During the first three phases of the initial operational test and evaluation (IOT&E), there were some radars that the ASPJ did not correctly detect, identify, and jam. There were also false returns. It must be emphasized that the IOT&E was not completed because the system was not sufficiently mature. When the corrections of deficiencies identified in the initial testing are certified, operational testing to support a full production decision will be conducted.

A primary purpose for operational test (OT) is to support the acquisition process by reducing uncertainty in programmatic decisions. OT determines the delta, if any, between what is required and what is built. However, that is not the only advantage gained through an effective OT program. OT&E provides a forecast to the user of the system's operational capability and may even serve to initiate the development of tactics to augment the weapon's combat performance. A good testing program will add a meaningful measure of confidence to the employment decision and, in fact, preclude that "nasty surprise."

Senator Roth: You informed the Assistant Secretary of Defense (C3I) that the Department should not commit to additional production until the ASPJ had demonstrated that it was effective and suitable. Do you, as a normal practice, make your recommendations to assistant secretaries or do you make them to the Secretary of Defense?

Dr. Duncan: By law, the Director, Operational Test and Evaluation (DOT&E), advises the Secretary of Defense and the Under Secretary of Defense for Acquisition (USD(A)) on the effectiveness and suitability of major weapon systems and the sufficiency of operational test and evaluation. My recommendations regarding ASPJ were made to the USD(A) via the Assistant Secretary of Defense (C3I) in his capacity as Chairman of the C3I Committee of the Defense Acquisition Board (DAB). As a normal practice, I maintain a working relationship with the ASD(C3I); we are kept informed of each other's respective positions on programmatic issues, principally through my Deputy for Strategic and C3I Systems.

Senator Roth: In your opinion, why did the Assistant Secretary of Defense (C3I) ask you to concur with the proposed exit criteria? What was his role? Has the Assistant Secretary become an advocate for the ASPJ? Did the Under Secretary of Defense (Acquisition) ask for your evaluation?

Dr. Duncan: The ASD(C3I) chairs the C3I Committee of the DAB. In this role he presides over a preliminary forum to work DAB issues and performs a secretariat function and staffing for the USD(A), the DAB Chairman. Therefore, it is appropriate for the ASD(C3I) to coordinate DAB member positions on the proposed exit criteria for the Chairman without the implication of program advocacy.

United States General Accounting Office

GAO

Testimony

Circumstances Surrounding the ASPJ Limited Production Decision

Statement of
Louis J. Rodrigues, Director, Command, Control,
Communications, and Intelligence Issues
National Security and International Affairs
Division

Before the
Subcommittee on Federal Services
Committee on Governmental Affairs
United States Senate

GAO Form 160 (12/87)

Mr. Chairman and Members of the Subcommittee:

I am pleased to be here today to discuss the Airborne Self-Protection Jammer (ASPJ) program, which is to develop a common defensive electronic countermeasure system for tactical aircraft. At the request of this Subcommittee, we have examined (1) how ASPJ test results were reported and used in the low-rate initial production decision and (2) the Department of Defense (DOD) Inspector General's (IG) conclusions from its audit of the ASPJ program.

Results of operational testing were presented at briefings of cognizant boards and committees prior to the low-rate initial production decision. Some of the briefings may have been overly optimistic. Regardless of the test results or how they were reported and interpreted, decisionmakers approved low rate initial production knowing that the ASPJ had not satisfactorily met exit criteria.

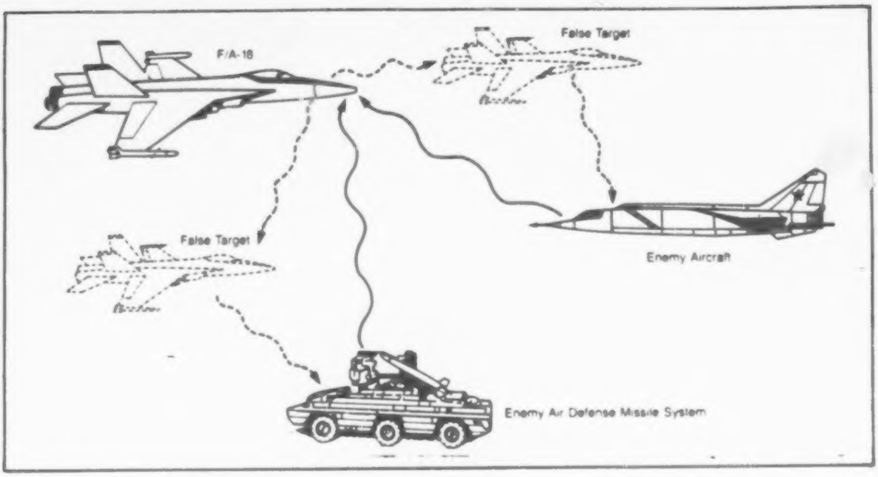
DODIG recommended stretching out deliveries and eliminating follow-on limited production decisions. We agree with the IG's recommendation since it would allow time for adequate operational testing thereby reducing program risks.

PROGRAM BACKGROUND

The ASPJ program began as separate Navy and Air Force development programs. In 1976, DOD directed the two services to jointly develop an advanced standardized system that could be used on a number of tactical aircraft and designated the Navy as the lead service. DOD awarded the full-scale development contract in 1981 to ITT Corporation and Westinghouse Electronics Corporation. The initial acquisition strategy was to eventually qualify both contractors to build the entire system and thereby open subsequent procurement to annual competition between the two. As of 1988, the Navy and Air Force planned to buy about 2,400 ASPJ systems--900 and 1,500 units, respectively--with an estimated program cost of $4.8 billion. In January 1990, the Air Force terminated its participation in the program.

ASPJ is intended to increase aircraft survivability by masking its location or deceiving enemy radar as to the true location of the aircraft as shown in figure 1.1.

Figure 1.1: How the ASPJ Works to Deceive Enemy Radar


F/A-18
False Target
False Target
Enemy Aircraft
Enemy Air Defense Missile System

ASPJ is supposed to provide tactical fighter aircraft jamming capability in a high density threat environment. It is designed to automatically engage multiple threats simultaneously and overcome the threats it considers most dangerous by selecting the most appropriate defensive response from a variety of preprogrammed noise and deception jamming techniques. It must be capable of providing self-protection against the threat beyond the year 2000.

ASPJ TESTING PROGRAM

The purpose of the ASPJ test program is to determine whether the system is capable of effectively countering defensive threat systems, that is surface-to-air missiles and anti-aircraft artillery guns, and airborne radar. In accordance with DOD guidance, the test program is structured in two distinct but overlapping phases--developmental and operational test and evaluation. Developmental test and evaluation assists the engineering design and development process and verifies that technical specifications are met. Operational test and evaluation assesses a system's operational effectiveness and suitability. Initial operational testing is used to predict potential operational effectiveness and suitability. After the production decision, follow-on operational testing verifies operational effectiveness and suitability.

The Navy and Air Force conducted separate developmental testing programs from 1986 to 1988. The basic ASPJ is a five-box, 255-pound, internal system for FA-18 aircraft. In June 1986, the Navy began testing at the Naval Air Test Center, Patuxent River, Maryland, with the basic system, in the F-18A. The system for the F-16 and F-14 aircraft is referred to as the common ASPJ and adds two more boxes and about 90 pounds to the basic system. In January 1987, the Air Force began testing at Eglin Air Force Base, Florida, with the seven-box system in the F-16A.

Operational testing started in July 1988 and was completed in February 1989 using the full-scale development model integrated into the Navy's F-18A and installed on, but not integrated into, the Air Force's F-16A. System integration is required to test ASPJ's compatibility with the aircraft's other avionics. The Air Force Operational Test and Evaluation Center and the Navy's Operational Test and Evaluation Force evaluated the test results against the performance requirements in the Test and Evaluation Master Plan. The Air Force performed laboratory tests at its electronic warfare simulation facility in Fort Worth, Texas, and flight tests at Eglin Air Force Base. The Navy conducted flight tests at the Naval Weapons Center, China Lake, California, and Navy and Air Force test ranges in Nevada.

REPORTED TEST RESULTS

The Navy completed its report on operational testing in April 1989, but the Air Force did not finalize their report until August 1989. However, results of these tests were presented at briefings to cognizant boards and committees prior to the low-rate initial production review in June 1989. These briefings included the

-- Naval Air System Command Acquisition Review Board meeting of April 20, 1989;

-- Navy Program Decision Meeting of May 10, 1989;

-- C3I Systems Committee Review of May 31, 1989; and

-- Defense Acquisition Board low-rate initial production review on June 12, 1989.

Some of the briefings on test results may have been overly optimistic. As the IG observed, these briefings may have been influenced by inappropriate direction from the Naval Air Systems Command's Acquisition Review Board. At its April 20, 1989, meeting, the Board denied approval to go forward to the next review level--the Navy Program Decision Meeting--because Navy and Air Force testers had not provided a clear supportive recommendation for the low-rate initial production decision. The Board also recommended that Navy and Air Force test organizations stress positive test results in future program briefings. In fact, Navy and Air Force test reports show that, although required during initial operational testing, the ASPJ did not demonstrate potential operational effectiveness and suitability.

Navy testers concluded that the ASPJ was marginally operationally effective and marginally operationally suitable. To become potentially operationally effective, the system had to be tested against and meet other known threat requirements, and to become potentially operationally suitable, certain critical operational issues, such as reliability, maintainability, and built-in-test requirements, had to be resolved. Navy testers recommended disapproval of ASPJ for limited fleet introduction until several corrective actions were taken and verified during additional testing.

According to the Air Force test report, all critical operational issues and objectives in the test plan were assessed, but many ratings were undetermined because the full-scale development version of the ASPJ was not mature. In fact, the testers concluded that critical operational suitability issues were undetermined because the system tested was not production representative and therefore not ready for suitability testing. Like the Navy, Air Force testers did not specifically recommend low-rate initial production and, in a highly qualified statement, concluded that tests of the production version would be necessary to determine the system's effectiveness and suitability.

On May 17, 1989, the Office of the Director of Cperational Test and Evaluation reported to the Assistant Secretary of Defense for, Command, Control, Communications, and Intelligence, on ASPJ's operational test results. The Office concluded that ASPJ was marginally operationally effective and marginally operationally suitable. It also concluded, as did the Navy, that the sytem should not be deployed until a successful operational test is conducted. Given only the options of approving low-rate initial production or program termination, the Office recommended approval on July 17, 1989. (Details on the Office's position and rationale for its decision are classified.)

THE LIMITED PRODUCTION DECISION

Regardless of the quality of the test results or how they were reported and interpreted, the Deputy Secretary of Defense and Under Secretary of Defense for Acquisition knew that the ASPJ was marginally operationally effective and marginally operationally suitable. They were aware that the ASPJ had not satisfactorily met exit criteria for the authorization to proceed from full-scale development to low-rate initial production. Nevertheless, on August 7, 1989, the Under Secretary recommended approval of low-rate initial production, and on August 16, 1989, the Deputy Secretary concurred in that recommendation.

According to the Defense Management Report to the President, dated July 1989, major acquisition programs must meet established baseline requirements--cost, schedule, and performance--or exit criteria before they can transition from one milestone to the next. In commenting at a July 11, 1989, DOD news briefing on the report, the Deputy Secretary of Defense noted that the process of developing new systems has to be disciplined so that when a program proceeds from one acquisition phase to another, DOD knows it met all the criteria. From the documents we reviewed, it appears that the decision to approve low-rate initial production for ASPJ was based on management's prerogative rather than strict adherence to the principles of DOD's acquisition guidance or the Defense Management Report to the President.

The Under Secretary offered two options to the members of the Defense Acquisition Board--approve limited production or terminate the program. A third option to delay the decision in the hope that further testing would provide substantiation for a favorable decision was considered. This option could have been implemented using the 20 production verification units scheduled for delivery from November 1989 to April 1991. However, members of the Board argued that termination or delay would have an adverse effect on operational aircraft and on the vendor base, the number of vendors in the program. They believed that a prolonged testing period would cause the vendor base to disappear and result in operational requirements not being met. Although these arguments were undocumented, the Deputy Secretary and Under Secretary apparently recommended approval for the decision largely based on their concern for vendor base dry up and impact on operational aircraft. As the DOD/IG reported, it could not validate these concerns during its audit.

DOD/IG AUDIT RESULTS

The recent DOD/IG audit confirms that problems with the ASPJ program will probably be exacerbated by the Air Force withdrawal from the program. One of the most obvious impacts is a significant increase in unit cost as a result of the drop in planned buys for the ASPJ from 2,400 to approximatelv 800 units.

We agree with the IG's major recommendation calling for the elimination of follow-on limited production decisions. Low-rate initial production should be limited to the 100 units currently on contract, especially as the total program buy is expected to drop to approximately 800 units. In addition, we agree with the DOD/IG's proposal to stretch out deliveries of low-rate initial production units so that complete and adequate operational test and evaluation can be accomplished without a break in production. If these recommendations are implemented, DOD would substantially reduce program risks by assuring the system demonstrates required performance prior to further production commitments.

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Mr. Chairman, before concluding my testimony, I would like to express our concern about the implications of the Air Force withdrawal. As we have reported a number of times during the 1980s, Air Force and Navy electronic warfare programs are marked by extensive and unnecessary proliferation of systems to meet a common threat. However, the ASPJ has represented a joint Air Force and Navy program offering potential for achieving the significant benefits inherent in common-service systems. These benefits include elimination of duplicative research and development costs, savings in production resulting from larger quantity buys, and reduced logistics costs stemming from common spare parts, maintenance equipment, and training.

The current concern about the pending ASPJ unit price increase resulting from the Air Force withdrawal clearly reinforces our belief that common systems can result in significant savings. If the Air Force decides to develop and procure a new internal jammer to meet its needs, our concern with unnecessary proliferation and duplicative developmental costs will be further reinforced.

I want to make it clear that GAO is neither an advocate nor an opponent of the ASPJ. However, as we have recommended in the past, the Air Force and Navy should acquire a common jammer to meet requirements--whether it be ASPJ or an alternative.

Mr. Chairman, this concludes my testimony. We will be pleased to answer any questions you or members of the Subcommittee have.

THE HONORABLE H. LAWRENCE GARRETT, III
SECRETARY OF THE NAVY

Good morning Mr. Chairman, and distinguished members of the Subcommittee. I am here this morning to speak with you about the Airborne Self-Protection Jammer (ASPJ) program.

The Navy has the requirement for a system with the capability of ASPJ to protect its tactical aircraft in the 1990s and beyond. At this time, ASPJ is the only system that shows the potential to meet the Navy's need for an internally mounted self-protection jammer. The performance demonstrated during the Initial Operational Test and Evaluation with engineering development systems was superior to any existing system in terms of the number and types of threats to which it responds. The performance can only improve from there.

The ASPJ program has some unique aspects as a result of numerous decisions made at earlier stages of the program. The decision to cap the Full Scale Development contract, the decision to use Full Scale Development units for initial operational evaluation, and the decision on economic production all laid the programmatic ground work for the June 1989 low rate initial production Milestone.

During this review all aspects of the ASPJ program, including the results of two phases of Initial Operational Testing, were thoroughly reviewed by the Air Force, the Navy and the Defense Acquisition Board before approval was granted to proceed with Low Rate Initial Production for 100 systems. This decision was fully supported by both services. Major factors weighing in the decision to proceed were the documented operational need, the recommendation of the Joint Operational Test Director which supported Low Rate Initial Production, program compliance with previous Defense Acquisition Board guidance, vendor base concerns and the clear indication that the Measures of Effectiveness used as the baseline for Operational Testing did not adequately evaluate system performance. This decision, as with any acquisition decision, was not without risk. This was thoroughly evaluated by the Defense Acquisition Board before it recommended approval for production. I am confident in our ability to manage satisfactorily the ASPJ program and successfully fulfill our requirement.

Since this decision, two events have occurred that have placed this program in the spotlight. One event was the initial hotline allegation that the Deputy Secretary of Defense ignored cost and performance data in making his decision. This allegation has since been assessed by the Inspector General to be not valid. The other event was the withdrawal of the Air Force from the program in December 1989, and we are evaluating our options for mitigating the effect of that withdrawal. These options include earlier completion of operational testing than is now planned. This is now feasible because the requirements of single service testing (one aircraft type/two test sites) are significantly reduced from the requirements for joint service testing (two aircraft types/five test sites).

The Navy and OSD are continually overseeing and reviewing the performance of the ASPJ. The future of the Lot I contracts or any subsequent production is always under scrutiny. For instance, we are considering delaying the Lot II contract award to maximize test data available, but still avoid a production break. I made the decision to go ahead with the Lot I contracts based on my confidence in the program. The Lot II awards must take place to avoid a production break and to ensure we do not jeopardize our entire investment. Each decision made will balance the operational need with system performance and cost to ensure that the best possible decision is made for the United States taxpayer. I plan to continue this program through Operational Test and Evaluation, and at that time make a decision on whether to request approval for full rate production. I will continue to give this program my personal attention and review it at its scheduled Milestones. If the program encounters any serious, unresolvable problems at any time, I will call for a formal review to determine if the program should continue.

As we discuss the business aspects of this program I want to ensure that we keep in mind the primary objective of ASPJ. Our aviators need this system to penetrate to the target, deliver their weapons, and return to fly and fight again. The survivability of our manned tactical aircraft is one of my top priorities, and we need this capability for our fleet.

Summary of DOD IG Investigation of the ASPJ
(by Senator Pryor)

* Tests to date do not confirm that the ASPJ meets effectiveness (performance) or reliability standards.

* The Navy Acquisition Review Board, chaired by the NAVAIR Commander, unduly directed operational testers to present favorable test results during the Defense Acquisition Board review process.

* The Review Board directed such action because the testers briefed test results and conclusions that did not present a clear and supportive recommendation for initial production.

* The C3I Systems Committee provided minutes of their review of the ASPJ program to the Defense Acquisition Board that _falsely_ stated that the ASPJ had satisfied test requirements and that the Navy testing commander _fully_ supported initial production.

* Despite problems with the accurate reporting of test results, Deputy Secretary Atwood was aware of ASPJ performance and reliability problems and a $1 billion understatement of costs when he approved low rate production in August, 1989.

* The Navy currently plans to commit $1 billion on production contracts before operational tests are completed. $668 million is already on contract.

* The Navy's arguments in support of ASPJ production, vendor base dry up and 1,000 aircraft without jammers, was overstated.

* The Air Force withdrawal from the joint Navy/Air Force program will increase unit costs to the Navy.

THE UNDER SECRETARY OF DEFENSE
WASHINGTON, DC 20301

ACQUISITION

18 JUL 1989

MEMORANDUM FOR DEFENSE ACQUISITION BOARD PRINCIPALS

SUBJECT: Airborne Self-Protection Jammer (ASPJ)

The Defense Acquisition Board (DAB) conducted a Milestone IIIA review of the ASPJ Program on 12 June 1989 to determine whether to authorize the first lot of Low Rate Initial Production (LRIP) as requested by the Navy. A wide range of alternatives was discussed. At this point, I believe that two alternatives are viable: Alternative 1 approves lot 1 production of ASPJ; and Alternative 2 terminates the ASPJ program. Based on my review of the alternatives for ASPJ, I believe terminating the ASPJ Program must be seriously considered due to issues of operational effectiveness, demonstrated reliability, and affordability.

I considered the option of postponing Milestone IIIA until ASPJ test results and reliability meet requirements and the total program cost and funding differences are resolved, but I do not view this as a viable alternative. Production and fielding of ASPJ would be significantly delayed, and costs would likely rise.

Attached is a point paper which provides a brief description of the pros and cons of alternatives 1 and 2 and a coordination sheet for you to indicate which alternative you support. I would appreciate your views by close of business Monday, July 17, 1989, prior to making my recommendation to the Deputy Secretary of Defense. When I make my recommendation, I will make the Deputy Secretary fully aware of your views.

Michael P. W. Stone, USD(A)
By Direction of the Secretary of Defense

Attachments

SELECTED TEST RESULTS:
(Source: Unclassified sections, Navy OPTEVFOR Evaluation Report, April, 1989)

> "Do not approve the ASPJ for limited fleet introduction until the following corrective actions are taken and correction verified during additional testing ..."

I - Reliability (how often it breaks down):

Mean Time Between Failure (MTBF):	Requirement:	33 hours
	Actual:	19 hours
Mean Time Between Maintainence:	Requirement:	6.8 hrs.
	Actual:	5.3 hrs.

II - BIT (Built-in Test - allows the ASPJ to detect its own faults, for pilot information and maintainance)

Probability of correct fault detection:	Requirement:	90%
	Actual:	29%

III - Critical Operational Issues Yet to be Resolved

Survivability
ECCM Vulnerability
Reprogrammability
Tactical Employment
Maintainability
Availability
Logistic Supportability
Compatability
Interoperability
Reloadability

IV - Effectiveness (ability to jam enemy radar):

> "The ASPJ is marginally operationally effective. In order to become potentially effective, ASPJ effectiveness must be improved for all threats not meeting criteria."

V - Other Conclusions

Navy: 1) "The ASPJ is marginally operationally suitable. In order to become potentially suitable, the following critical operational issues must be resolved satisfacotrily: Reliability, Maintainability, BIT, and Human Factors."

2) "Continue Initial Operational Test and Evaluation to assess effectiveness COI's against previously untested threat simulators and flight profiles..."

OFFICE OF THE UNDER SECRETARY OF DEFENSE
WASHINGTON, DC 20301

ACQUISITION

25 July 1989

MEMORANDUM FOR THE DEPUTY SECRETARY OF DEFENSE

SUBJECT: Airborne Self-Protection Jammer (ASPJ)

Attached to this memorandum is a package dealing with the Acquisition Decision Memorandum (ADM) for the Airborne Self-Protection Jammer (ASPJ).

Since the June DAB, Service and OSD members have been trying to reach a coordinated position. That has not been possible, and the issue now, for your concurrence, is whether to terminate the program or to authorize the production of the equipment that constitues Lot I (LRIP).

The decision involves your consideration of a fundamental precept that is a centerpiece of the Defense Management Review: the USD(A) must ensure that "more exact requirements are met" as systems move from milestone to milestone and that strict discipline be maintained with regard to the achievement of development goals. There is clearly no doubt that the ASPJ system has not satisfactorily met the criteria for the authorization to proceed with LRIP. On the other hand, approximately 1000 aircraft will have to depend on older, less effective systems or have no protection at all if the ASPJ system does not become available for installation in those aircraft.

The essential facts are these:

1. The ASPJ program was initiated in March 1976. A Milestone II review was conducted in July 1979 and full-scale development contract has been in effect for the last eight years. The contract was awarded to a joint venture of ITT and Westinghouse.

2. Test data compiled to date indicates that ASPJ represents a modest advance over already fielded and less costly jamming devices. The central argument is that, despite the modest technological improvement, the trend line is upwards. The rebuttal to that point is that the Navy, which is responsible for the program, had previously signed up for the same test benchmarks that the Navy now says are inapplicable at this stage of the program's schedule.

3. The CAIG believes that program costs are underestimated by at least $1B. The accuracy of program costs depends in considerable measure on savings theoretically to be obtained through competition.

4. MTBF presently is barely half of the minimum requirement.

5. Despite a program that now goes back almost 13 years, system progress has been extremely slow, and many enemy threats cannot be satisfactorily handled. The contrary argument is that ASPJ nevertheless does more than any other system that we have in the inventory or that we have under development.

The Services all vote in favor of granting approval for LRIP. Most of the OSD staff votes for termination. My disposition has been to terminate, but I have decided to recommend to you an intermediary, compromise alternative. That alternative was introduced by me in the DRB and was premised on (a) a deferral of the LRIP decision, and (b) a continuation of testing, with the hope that such testing would provide the substantiation for a favorable LRIP decision.

My suggestion was not deemed acceptable by most participants because it was then believed and is still believed that the vendor base would disappear during a prolonged testing period and that it would be both difficult and expensive to re-establish the vendor base after that additional period of testing. My answer to that argument is that I would rather take a chance on reestablishing the vendor base than waste money on an ineffective and costly system that could end up by giving minimum operational improvement.

Larry Garrett, in his 19 July memorandum nonconcurring in the termination recommendation, agrees that "An option of delaying ASPJ should be discussed." He goes on to point out that the consequences of such a delay would greatly increase the costs of the program.

In summary, I recommend that the program be delayed to permit additional testing. If you wish, John Betti can convene another DAB in the fall to review cost and supplier base issues resulting from the delay. Based on this review, he may recommend revoking the decision to delay and grant LRIP approval or, alternatively, terminating the program.

Michael P. W. Stone
By Direction of the Secretary of Defense

THE DEPUTY SECRETARY OF DEFENSE
WASHINGTON, D.C. 20301

July 31, 1989

MEMORANDUM FOR MIKE STONE

SUBJECT: Airborne Self Protection Jammer (ASPJ)

This is in response to your memorandum of July 25, 1989, relative to the Airborne Self Protection Jammer.

Your memorandum indicates that the program has been in development since March 1976, and to date it has not satisfactorily passed the tests established relative to cost, performance and reliability. This is a clear case of not meeting the exit criteria established for transition from the Full Scale Development Phase to the Production Phase. Therefore, it appears mandatory that one of two actions be taken:

1. Cancel the program.

2. Discontinue all production efforts and relegate the program to an effective test and evaluation activity. If the system demonstrates the required performance and reliability and is cost effective, then a production program could be initiated.

There is one alternative to the above which could be considered. This is based on the fact that the services feel that the system is essential and that it will ultimately meet the performance and reliability targets. If this is the case and can be demonstrated within a reasonable period (i.e. one year), then in order to maintain program continuity, it might be acceptable to proceed with a very limited production phase while test and evaluation is conducted.

However, it is difficult to see how this is realistic given that the system has been in development for 13 years and as yet has not proven out. If, in spite of this, you decide to go ahead with a very limited production, then it must be mandatory that full demonstration of the performance and reliability be demonstrated within one year. If it is not, then the program must be cancelled.

DJ Atwood

Donald J. Atwood

OFFICE OF THE SECRETARY OF DEFENSE
WASHINGTON, DC 20301-1700

OPERATIONAL
TEST AND
EVALUATION

March 29, 1990

MEMORANDUM FOR ASSISTANT SECRETARY OF DEFENSE (C3I)

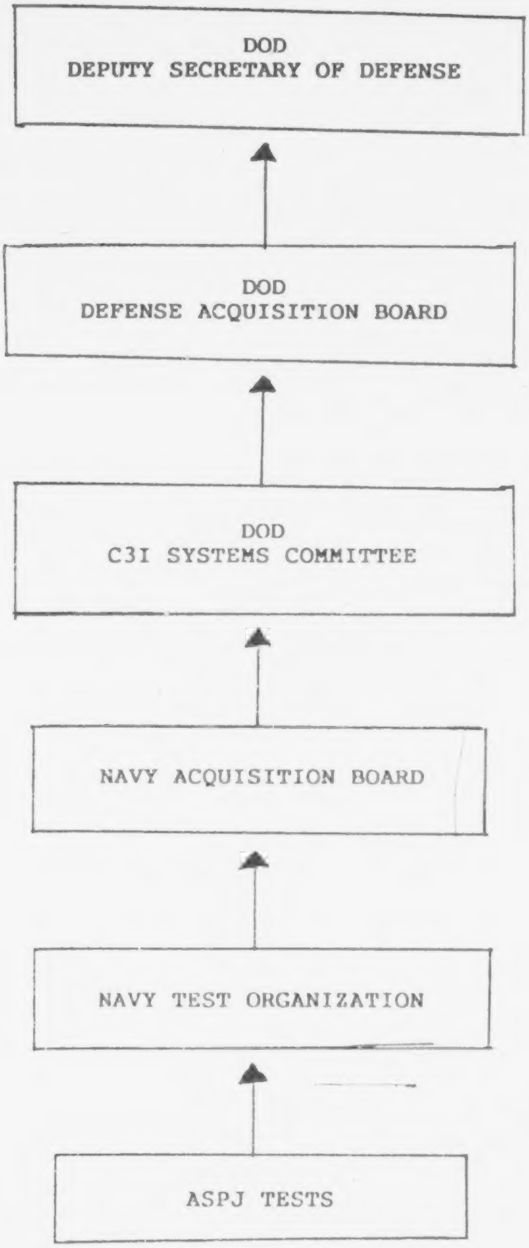
SUBJECT: Airborne Self Protection Jammer (ASPJ) Exit Criteria

I have reviewed your request for my coordination on proposed exit criteria for the production contract awards for Lots II and III of the ASPJ and cannot concur with them. Lot I production (104 units) is more than sufficient to provide the 18 test articles for OT&E.

The ASPJ's inability to meet established cost, performance, and reliability criteria does not justify going beyond Lot I. This position is consistent with that taken by DOT&E in the June 1989 DAB review. We should not commit to Lots II and III production until the ASPJ has demonstrated in OT&E that it is effective and suitable.

Robert C. Duncan
Director

ASPJ Decision Path


DOD
DEPUTY SECRETARY OF DEFENSE
DOD
DEFENSE ACQUISITION BOARD
DOD
C3I SYSTEMS COMMITTEE
NAVY ACQUISITION BOARD
NAVY TEST ORGANIZATION
ASPJ TESTS

THE DEFENSE MANAGEMENT CHALLENGE:

Recommendations for Managing Defense Resources in the 1990s

by Senator Charles E. Grassley
March 7, 1990

A Response to the Defense Management Report Implementation Activities

TABLE II-2

DMR IMPLEMENTATION INITIATIVES BY MILITARY SERVICE

DMR RECOMMENDATION	ARMY	NAVY	AIR FORCE
PLANNING REFORMS (BIENNIAL BUDGETING, PROGRAM PLANNING OBJECTIVES, 20-YR ROAD MAPS, REALISTIC FUNDING ESTIMATES, P.8)			
REVITALIZED DAB (P.5-7)	ORIENTS PMS TOWARD RISK MANAGEMENT, MILESTONES CONSOLIDATED TO 4, DAB DECISIONS SIGNED OUT WITHIN 48 HOURS OF MEETING		
BROADER ROLE FOR JOINT REQUIREMENTS OVERSIGHT COUNCIL (JROC, P.7,17)			
TRANSFER MAJOR AUTOMATED SYSTEMS ACQUISITION OVERSIGHT TO DAB (P.7)		CONSOLIDATED UNDER SAE	CONSOLIDATED UNDER AFSARC
THREE-TIER ACQUISITION STRUCTURE FOR EACH MILITARY DEPARTMENT (P.9)	ESTABLISHED, 12 PEOS	ESTABLISHED, NEW SAE, SEVEN PEOS, COVERS 21 OF 51 SYSTEMS	ESTABLISHED, 6 PEOS
ACTIVE INVOLVEMENT OF USD/A AND SAE'S IN PROGRAM AND BUDGET CYCLES, RESOURCE DECISIONS AFFECTING PROGRAM BASELINES (P.10)			
REMOVE MULTI-YR PROCUREMENT SAVINGS THRESHOLD REQUIREMENT (P.11)			
SUSTAINED TENURE FOR SUCCESSFUL PEOS AND PROGRAM MANAGERS (P.11)			
REGULATORY REVIEW OF ACQUISITION, PROCUREMENT, LOGISTICS, AND RELATED ACTIVITIES (P.11)	CONDUCTED BY AN OSD LED TASK FORCE, REMOVING OR COMBINING REGULATION		
REVIEW OF SINGLE-PURPOSE REQUIREMENTS (P.12)			
SELECT NEW DEFENSE ENTERPRISE PROGRAMS (P.12)			
DOD-WIDE CIVILIAN ACQUISITION PERSONNEL POLICIES (P.13)	- USING STAFF NOW IN ACQUISITION PROGRAMS - DEVELOPING CIVIL SCHOOLING LEGISLATION - ESTABLISHED ARMY ACQUISITION CORPS	- ESTABLISHED DIRECTOR FOR ACQUISITION WORKFORCE EDUCATION AND TRAINING - ESTABLISHED EDUCATION, TIME OF SERVICE, AND PERFORMANCE REQUIREMENTS	IN PROCESS OF DEVELOPING CAREER PATH
DOD PAYMENT FOR ACQUISITION-RELATED COURSEWORK (P.13)			
DOD ACQUISITION WORKFORCE CLASSIFICATION STANDARDS (P.13)			
DEDICATED MILITARY ACQUISITION CORPS AND ASSOCIATED TRAINING PROGRAM (P.14)			
CENTRAL USD/A OFFICE FOR ACQUISITION PERSONNEL (P.15)			
STREAMLINE ACQUISITION MANAGEMENT, LOGISTICS, DISTRIBUTION, AND RELATED MAINTENANCE FUNCTIONS TO SAVE $30B 1991-95 (P.16)	AMC STREAMLINED & STAFFING REDUCED	NAVY SECRETARIAT STREAMLINED, BUYING COMMANDS STREAMLINED & STAFFING REDUCED	AFLC, AFSC STAFFING REDUCED
CONSOLIDATE CONTRACT ADMINISTRATION INTO NEW AGENCY (P.17)	STREAMLINED AT AMMUNITION PLANTS, TRANSFERRED FROM TANK PLANTS AND APROS		STREAMLINING "ACCORDINGLY"
USD/A CONTROL OF CONCEPT DIRECTION STUDY FUNDING (P.18)			
USE CONCURRENT ENGINEERING AND OPERATIONAL TESTING FOR MAJOR PROGRAMS (PP. 18-19)			
REVISIONS TO DAB MILESTONE REVIEWS (P.19)			
USD/A IMPROVE SARS, DAES, AND OTHER ACQUISITION INFORMATION SYSTEMS (P.19)			

TABLE II-2 (Continued)

DMR IMPLEMENTATION INITIATIVES BY MILITARY SERVICE

DMR RECOMMENDATION	ARMY	NAVY	AIR FORCE
COORDINATE TECHNOLOGY BASE PROGRAMS AND ELIMINATE DUPLICATION (ENCOURAGE COMPETITION, PROTOTYPING, COST REDUCTION, P.19)	ARMY LABS AND ARMY T&E STUDY GROUPS EVALUATING HOW TO INCREASE EFFICIENCY AND QUALITY		
IMPLEMENT DSB RECOMMENDATIONS ON COMMERCIALLY AVAILABLE PRODUCTS AND COMPETITIVE PRACTICES (P.20)			
ESTABLISH DATABASE TO TRACK USE OF COMMERCIALLY AVAILABLE PRODUCTS (P.20)			
DEVELOP LEGISLATION TO SIMPLIFY CONTRACTING PROCEDURES FOR COMMERCIALLY AVAILABLE PRODUCTS (P.20)			
DEVELOP LEGISLATION FOR AWARDING COMPETITIONS TO BEST VALUE (P.20)			
DEVELOP DOD-WIDE CONTRACTOR PERFORMANCE REVIEW SYSTEM (P.20)			
ADMINISTER ETHICS REGULATIONS AND DEVELOP WORKFORCE TRAINING AND GUIDANCE (P.21)			ESTABLISHING PROGRAMS
CHARTER A DOD ETHICS COUNCIL (P.22)			
ENCOURAGE CONTRACTOR SELF-GOVERNANCE AND DISCLOSURE (PP.22-3)			
REMOVE INDUSTRIAL BASE DISINCENTIVES (PP.24-5)			
DEVELOP DEFENSE INDUSTRY QUALITY AWARDS PROGRAM (P. 25)			
STREAMLINE PROCUREMENT LAWS (P.26)			
PREPARE WHITE PAPER ON CONGRESS AND DOD RELATIONSHIP (P.27)			

DEPARTMENT OF DEFENSE

AUDIT REPORT

HOTLINE ALLEGATIONS REGARDING THE MILESTONE IIIA
PRODUCTION DECISION FOR THE
AIRBORNE SELF-PROTECTION JAMMER PROGRAM

No. 90-066

May 10, 1990

This is an unclassified version of
classified Report No. 90-066

Office of the
Inspector General

INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
400 ARMY NAVY DRIVE
ARLINGTON, VIRGINIA 22202-2884

May 10, 1990

MEMORANDUM FOR UNDER SECRETARY OF DEFENSE FOR ACQUISITION
ASSISTANT SECRETARY OF DEFENSE (COMMAND, CONTROL, COMMUNICATIONS AND INTELLIGENCE)
ASSISTANT SECRETARY OF THE NAVY (FINANCIAL MANAGEMENT)
ASSISTANT SECRETARY OF THE AIR FORCE (FINANCIAL MANAGEMENT AND COMPTROLLER)

SUBJECT: Final Report on the Audit of Hotline Allegations Regarding the Milestone IIIA Production Decision for the Airborne Self-Protection Jammer Program (Report No. 90-066)

This is our final report on the Audit of Hotline Allegations Regarding the Milestone IIIA Production Decision for the Airborne Self-Protection Jammer (ASPJ) Program for your information and use. The audit was made from September 1989 to March 1990 in response to a Hotline complaint that questioned the Deputy Secretary of Defense's approval of limited production for 104 ASPJ units, costing over $400.0 million. Specifically, the complainant alleged that the Deputy Secretary, when granting the approval, ignored information that showed that ASPJ units did not meet operational requirements and fell far short of operational effectiveness and that showed the cost of the ASPJ Program was seriously understated. During the audit, we also received supplemental Hotline complaints questioning the extent of ASPJ acquisitions prior to testing, the reliability of ASPJ units, the ASPJ Program Office's criticism of the criteria used to conduct operational tests, the accuracy of test results briefed to Defense decisionmakers, and the reasonableness of the estimated cost of the ASPJ Program. The primary objectives of the audit were to evaluate the Defense Acquisition Board's review process that led to the Deputy Secretary's decision, to determine whether the allegations were valid, and to determine whether any of the allegations warranted further management attention.

The primary allegation was not valid. The Deputy Secretary of Defense was well aware of the test results and of concerns about the accuracy of cost data, and the Deputy Secretary considered those matters before making a decision. The Deputy Secretary authorized the award of the Lot 1 production contracts mainly because the Navy informed him that the vendor base for ASPJ units would dry up and that the Navy and Air Force would have aircraft without jamming capabilities if the contracts were not awarded. On the other Hotline allegations, we found much validity. In Appendix A, we list and discuss the validity of each allegation. While determining the validity of the allegations, we identified certain conditions that require management's attention. Those conditions are summarized in the following paragraphs, and the details, along with audit recommendations, are contained in Part II of this report.

The acquisition plan for the ASPJ Program provided for the Navy to proceed with extensive production of ASPJ units before operational testers will determine whether production-representative ASPJ units will be effective and suitable for use in the intended operational environment. (Details on the amount that could be committed for production before the completion of operational test and evaluation are contained in the classified version of this report). Such an investment exposes the DoD to substantial cost risk if the ASPJ units do not prove to be effective or if retrofits are required to make them effective. To reduce the cost risk, we recommended that the Under Secretary of Defense for Acquisition defer further production decisions on the ASPJ Program until operational test and evaluation confirms the combat effectiveness and suitability of ASPJ units. We also recommended that the Commander, Naval Air Systems Command renegotiate the current Lot 1 contracts to stretch out deliveries of the 100 ASPJ units on the contracts so that there will not be a break in production before the successful completion of operational test and evaluation (page 5).

The ASPJ Acquisition Review Board, which was chaired by the Commander, Naval Air Systems Command, unduly influenced presentations to decisionmakers by directing operational testers to present favorable test results at program review meetings. We found no evidence that the operational testers changed their test reports; however, we did note that the operational test results that were briefed to the Command, Control, Communications and Intelligence (C3I) Systems Committee by the Navy operational tester were incomplete and misleading concerning the demonstrated operational performance of the ASPJ. Also, we found that the minutes of the C3I Systems Committee Review of the ASPJ Program that were presented to the Defense Acquisition Board misrepresented the tester's findings and recommendations. To prevent recurrences of officials influencing the independence of operational testers, we recommended that the Under Secretary of Defense for Acquisition reemphasize to acquisition managers the necessity and importance of independent test and evaluation efforts and direct the managers not to influence or attempt to influence the objectivity and completeness of test results presented to decisionmakers. We also recommended that the Under Secretary establish guidance that requires coordination of program review minutes with operational testers before the minutes are presented to the Defense Acquisition Board (page 17).

The ASPJ Program Office did not actively attempt to resolve $1.3 billion to $1.6 billion of differences between cost estimates of the OSD Cost Analysis Improvement Group (CAIG) and the Program Office. As a result, the ASPJ Program's cost estimate may be significantly understated. To resolve the questionable cost estimate for the ASPJ Program, we recommended that the Under Secretary of Defense for Acquisition, in his capacity as the Defense Acquisition Board's Chairman, direct the ASPJ Program Office and the CAIG to immediately identify differing cost estimating assumptions, develop an agenda for resolving the differences, and resolve the issues by August 1, 1990. We also recommended that the Under Secretary direct the Chairman of the C3I Systems Committee to review, approve and monitor the agenda for resolution of the cost estimating differences (page 21).

On April 17, 1990, we provided a formal draft of this report to the Under Secretary of Defense for Acquisition; the Assistant Secretary of Defense for Command, Control, Communications and Intelligence; the Assistant Secretary of the Navy (Financial Management); and the Assistant Secretary of the Air Force (Financial Management and Comptroller) for review and comment. When we prepared the final reoport, we had not received management comments on the draft report. As of this date, we have received management comments only from the Assistant Secretary of Defense (Command, Control, Communications and Intelligence) who nonconcurred in all of our findings and recommendations. Therefore, we request that the other addressees respond to the final report indicating concurrence or nonconcurrence with each of the findings and recommendations. If you concur, please describe the corrective actions taken or planned, the completion dates for actions already taken, and the estimated dates for completion of planned actions. If you nonconcur, please state your specific reasons. If appropriate, you may propose alternative methods for accomplishing desired improvements. DoD Directive 7650.3 requires that all audit recommendations be resolved within 6 months of the date of the final report. Accordingly, all responses to the final report should be provided within 60 days of the date of this memorandum.

Appendix L provides an explanation of the benefits that would accrue to the Department of Defense as a result of implementing the report's recommendations. Recommendations A.1. and A.2. have the potential for achieving substantial monetary benefits. However, the value of those benefits is undeterminable at this time. Therefore, this report does not claim any specific amount of monetary benefits. Monetary benefits, dependent on management's response to the final report, may be claimed at a later date.

The cooperation and courtesies provided to the audit staff are appreciated. A list of audit team members is in

Appendix N. Please contact Mr. Rayburn H. Stricklin, Program Director, at (202) 694-3965 (AUTOVON 224-3965) or Mr. Harry L. Followell, Project Manager, at (202) 693-0400 (AUTOVON 223-0400) if you have any questions concerning this report. Copies of the final report will be distributed to the activities shown in Appendix O.

Stephen A. Trodden

Stephen A. Trodden
Assistant Inspector General
for Auditing

Enclosure

cc:
Secretary of the Navy
Secretary of the Air Force
Assistant Secretary of Defense (Program Analysis and Evaluation)

FINAL REPORT ON THE AUDIT OF HOTLINE ALLEGATIONS REGARDING THE MILESTONE IIIA PRODUCTION DECISION FOR THE AIRBORNE SELF-PROTECTION JAMMER PROGRAM

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Prepared by:
Acquisition Management
  Directorate
Project No. 9AE-8008

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FINAL REPORT ON THE AUDIT OF HOTLINE ALLEGATIONS REGARDING THE MILESTONE IIIA PRODUCTION DECISION FOR THE AIRBORNE SELF-PROTECTION JAMMER PROGRAM

PART I - INTRODUCTION

Background

The AN/ALQ-165(V) Airborne Self-Protection Jammer (ASPJ) Program was established to provide a common defensive electronic countermeasures system for over 2,000 Navy and Air Force tactical aircraft (AV-8B, F-14, F-16, and F/A-18) from the late 1980's into the 21st century. As a radio frequency jammer, the ASPJ is intended to increase combat survivability of U.S. aircraft by jamming or deceiving radar-controlled weapons of the enemy to the extent that the enemy does not know the true location of the U.S. aircraft.

The ASPJ program was the largest major joint Service tactical electronic warfare program. The Navy has been the lead for most of the approximate 14 year existence of the ASPJ joint (Navy and Air Force) development program. (Specifics on the life-cycle cost of the ASPJ Program are contained in the classified version of this report). The Defense Acquisition Board's Command, Control, Communications and Intelligence (C3I) Systems Committee is the focal point for OSD oversight of the program.

On August 16, 1989, the Deputy Secretary of Defense authorized the ASPJ Program to move into low-rate initial production (LRIP) and authorized the Navy to award production contracts for 104 ASPJ units. Prior to those authorizations, the ASPJ Program Office had bought 32 ASPJ units (12 developmental units and 20 production verification units).

On August 23, 1989, we received a DoD Hotline complaint questioning the Deputy Secretary of Defense's approval of limited production for 104 ASPJ units. Specifically, the complainant alleged that the Deputy Secretary, when granting the approval, ignored information that showed that ASPJ units did not meet operational requirements and fell far short of operational effectiveness and information that showed that the cost of the ASPJ Program was seriously understated.

On October 4, 1989, we received another Hotline complaint regarding the ASPJ. The supplemental complaint questioned the extent of ASPJ acquisitions prior to testing, the reliability of ASPJ units, the ASPJ Program Office's criticism of the criteria used to conduct operational tests, the accuracy of test results briefed to Defense decisionmakers, and the reasonableness of the estimated cost of the ASPJ Program.

On October 6, 1989, the Navy awarded two contracts for the Lot 1 production units. The two contracts were contract N00019-89-C-0160 with ITT Avionics Division, Nutley, New Jersey, and contract N00019-89-C-0161 with Westinghouse Electronic Systems Group, Baltimore, Maryland. The contracts provided for the delivery of 100 ASPJ units, as well as spares and testing services for a cost of about $420.1 million.

On November 17, 1989, the Secretary of the Air Force recommended to the Secretary of Defense that the Air Force cancel its participation in the ASPJ Program. The Secretary of the Air Force presented this recommendation as one of numerous recommendations that he made to achieve the Secretary of Defense's revised fiscal guidance.

On December 11, 1989, the Secretary of Defense approved Program Budget Decision 807, terminating the entire ASPJ Program. On December 15, 1989, after the Navy provided additional information, the Deputy Secretary of Defense approved Program Budget Decision 807C, reinstating the Navy's portion of the ASPJ Program.

Objectives and Scope

The objectives of the audit were to evaluate the Defense Acquisition Board review process as it related to the ASPJ Program Milestone IIIA decision (approval of LRIP), to determine the validity of statements contained in the two DoD Hotline complaints, and to determine whether any of the complaints warranted further management attention.

We reviewed the documentation supporting the ASPJ Program Milestone IIIA decision and the need to proceed with LRIP prior to receiving successful operational test results on production-representative ASPJ units. We also reviewed records showing the extent that the ASPJ Program constituted 17 contractors' projected sales and the extent that AV-8B, F-14, F-16, and F/A-18 aircraft, which were scheduled for delivery, depended on the ASPJ units for jamming capabilities. We also analyzed the results of multiple operational tests and evaluations conducted on ASPJ units and reviewed records of briefings made to Navy and OSD-level decisionmakers on the results of operational tests and evaluations. In reviewing the documentation and records, we interviewed program, procurement, test, contractor, vendor, and Defense Acquisition Board personnel.

This program audit was made from September 1989 through March 1990 and included a review of records dating from October 1975 to March 1990. In addition to being made in response to DoD Hotline complaints, the audit was made as part of our continuing audit effort to determine the effectiveness of the DoD's oversight of major acquisition programs (the Defense Acquisition Board process). As such, the results of this audit will be considered in preparing a future summary report that will address the overall effectiveness of the Defense Acquisition Board process. The audit was made in accordance with auditing standards issued by the Comptroller General of the United States, as implemented by the Inspector General, DoD, except for the standards requiring reviews of internal controls. A list of the activities visited or contacted during the audit is in Appendix M.

Internal Controls

We did not review internal controls as part of this audit because internal controls will be reviewed as part of our overall audit on the effectiveness of the Defense Acquisition Board process.

Prior Audit Coverage

Since October 1985, there have been three reports issued covering the ASPJ Program. Those reports are listed below and are described briefly in Appendix B.

General Accounting Office Report No. NSIAD-89-3 (OSD Case No. 7730), "Electronic Warfare: Status of the Airborne Self-Protection Jammer Program," November 4, 1988.

General Accounting Office Report No. NSIAD-88-160 (OSD Case No. 7590), "DoD Acquisition Programs: "Status of Selected Systems," June 30, 1988.

General Accounting Office Report No. NSIAD-86-1 (OSD Case No. 6535), "An Opportunity to Reduce Proliferation and Improve Acquisition Strategy for Electronic Combat Jammers," October 8, 1985.

PART II - FINDINGS AND RECOMMENDATIONS

A. Production Decisions

FINDING

The acquisition plan for the Airborne Self-Protection Jammer (ASPJ) program provided for the Navy to proceed with extensive production of ASPJ units before operational testers will determine whether production-representative ASPJ units will be effective and suitable for use in the intended operational environment. The Navy planned to proceed with production because of unjustified concerns that the vendor base for the ASPJ would "dry up" and that about 1,000 aircraft would be awaiting ASPJ units if production were disrupted. (Details on the amount that could be committed for production before the completion of operational test and evaluation are contained in the classified version of this report). Such a substantive investment exposes the DoD to unnecessary cost risk if the ASPJ units do not prove effective or if retrofits are required to make them effective.

DISCUSSION OF DETAILS

Background. DoD Directive 5000.3, "Test and Evaluation," dated March 12, 1986, requires that critical test issues be established in a Test and Evaluation Master Plan (Test Plan) for demonstrating and validating system operational performance before low-rate and full-rate production decisions. Critical operational test issues are defined as system operational test capabilities that must be resolved before the system's overall worth can be estimated and that should be considered by the decision authority in allowing the system to advance to the next phase of the acquisition process. Before the full-rate production decision, the Directive requires that operational test and evaluation be conducted on a production-representative system to determine that the system meets operational thresholds, is effective and suitable for its intended use, and supports a positive production decision.

Status of the Acquisition Plan for the ASPJ Program. At the time of the Defense Acquisition Board's (DAB) Milestone IIIA review in June 1989, the Navy's acquisition plan provided for the procurement of 2,303 ASPJ's, 1,509 for the Air Force (66 percent) and 794 for the Navy (34 percent). (Details on the estimated procurement cost are contained in the classified version of this report). As of February 28, 1990, the Navy had awarded contracts for 120 ASPJ production units. The first 20 units (production verification (PV) units) were awarded to the joint venture that developed the ASPJ. The 20 units were estimated to cost about $248.0 million. The remaining 100 units (production Lot 1) were awarded on 2 separate contracts, 50 units to each of the joint venture contractors on October 6, 1989. The two firm-fixed price incentive contracts totaled about $420.1 million. After the DAB review, two additional low-rate initial production (LRIP) decisions were planned by the Navy before the full-rate production decision. The first decision was for 155 units during May 1990 and the other decision was for 157 units during February 1991. The full-rate production decision was planned for December 1991. The remainder of the units for the ASPJ Program were to be procured over a period of 6 years. The following table shows the Navy's acquisition plan at the time of the June 1989 DAB review.

Fiscal Year	Number of Units	Type of Unit
1987	6	Phase I PV
1988	14	Phase II PV
1989	104	Lot 1 LRIP
1990	155	Lot 2 LRIP
1991	157	Lot 3 LRIP
1992	329	Production
1993	315	Production
1994	382	Production
1995	332	Production
1996	256	Production
1997	253	Production
Total	2,303	

At the conclusion of our audit phase on February 28, 1990, two ASPJ production verification units had been delivered and were undergoing contractor qualification tests at Westinghouse Electric Corporation's (WEC) Electronic Systems Group, Baltimore, Maryland.

Extent of Operational Test and Evaluation. At the time of our audit, there were three initial operational test and evaluation efforts on the ASPJ. However, these efforts were not conducted with a production-representative ASPJ in an operationally realistic threat environment or with a production-representative ASPJ that was maintained and logistically supported by typical military personnel. The purpose of the initial operational test and evaluation efforts was to resolve or partially resolve critical operational test issues before making ASPJ production decisions. The ASPJ Test Plan listed 20 critical operational test issues that required resolution. Brief descriptions of the three efforts and their results follow.

Test Phase IIA. In June 1988, the Commander, Naval Operational Test and Evaluation Force, and the Commander, Air Force Operational Test and Evaluation Center conducted phase IIA of initial operational test and evaluation at Naval Weapons

Center, China Lake, California, and at Eglin Air Force Base, Florida, respectively. Because the full-scale development model of the ASPJ was at such an early stage of development, the purpose of the test was to assess the potential operational effectiveness and suitability of the ASPJ, identify operational issues for phase IIB and phase IIC initial operational tests and evaluations, and support Navy and Air Force decisions to buy 14 ASPJ production verification units. However, neither test organization was able to fully assess ASPJ's potential operational suitability because of limitations to the scope of testing. The test organizations concluded that the ASPJ was potentially operationally effective and therefore, supported a recommendation to buy the production verification units.

Test Phase IIB. In September 1988, the Commander, Air Force Operational Test and Evaluation Center, conducted phase IIB of initial operational test and evaluation at the Air Force Electronic Warfare Evaluation Simulator. (The details pertaining to the purpose of the test and the test results are included in the classified version of this report).

Test Phase IIC. In July 1988, the Commander, Naval Operational Test and Evaluation Force, and in November 1988, the Commander, Air Force Operational Test and Evaluation Center, conducted phase IIC of (the most recent) initial operational test and evaluation at Naval Weapons Center, China Lake, California, and at Eglin Air Force Base, Florida, respectively. (Further details pertaining to the purpose of the test and the types of aircraft used in testing are included in the classified version of this report). Accordingly, ASPJ test results were not projectable to ASPJ performance on the intended aircraft.

Further, operational testers were prevented from determining the ASPJ's overall worth and resolving critical operational test issues before the August 16, 1989 production decision because of test limitations that were known before the phase IIB and phase IIC operational tests. The 20 critical operational test issues that were planned to be resolved or partially resolved before the ASPJ production decision are listed in Appendix C. The Test Plan listed 13 test limitations, and the Navy and the Air Force operational testers identified another 4 test limitations that impaired the testers from resolving the 20 critical operational test issues. Test limitations affecting the testers' ability to resolve critical operational test issues are listed in Appendix D. For example, nine test limitations prevented operational testers from resolving the critical operational test issue for survivability (Will the ASPJ increase aircraft survivability against enemy air defense systems?). Known test limitations included the following.

- Test Article. The ASPJ units used in the test were full-scale development models, which were not representative of the ASPJ units to be produced. Operational testers estimated that over 50 percent of the hardware and software will be changed in the production version of the ASPJ. Therefore, testers could not determine production system performance.

- Test Facility. The electromagnetic environments at the test ranges were not representative of the expected operational environment. For example, the environments at the test ranges had . . . (Details pertaining to limitations of the test facilities are included in the classified version of this report).

- Test Range Instrumentation. Time-space position information (TSPI) accuracy prevented tactically representative altitudes from being flown during the tests. (Details on limitations of test range instrumentation are contained in the classified version of this report). As a result, the testers could not measure the effectiveness of the ASPJ in defeating or degrading threat radar systems in the intended operational environment for the ASPJ aircraft.

In summary, known test limitations prevented Navy and Air Force testers from assessing 9 of the 20 critical operational issues and from fully resolving the remaining 11 critical operational issues during the operational tests. Appendix E lists the status of resolution of each of the 20 critical operational issues.

Test Phases IIB and IIC: Testers' Conclusions. Within the constraints imposed by the scope limitations during phase IIC, the Commander, Naval Operational Test and Evaluation Force concluded that the ASPJ was marginally operationally effective 1/ and marginally operationally suitable 2/. The Commander stated that ASPJ's effectiveness must be improved against all threats for which the ASPJ did not meet the minimum user requirements for the ASPJ to be considered potentially effective. The Commander also concluded that critical operational issues for reliability,

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1/ (U) Marginally operationally effective means that some of the critical operational effectiveness issues scheduled for testing were not satisfactorily resolved, which preclude rendering a finding of potentially effective. The system has exhibited significant problems that require a review of the program direction and possible correction of problems prior to the next phase of operational testing.

2/ (U) Marginally operationally suitable means that some of the critical operational suitability issues scheduled for testing were not satisfactorily resolved, which preclude rendering a finding of potentially suitable. The system has exhibited significant problems that require a review of the program direction and possible correction of problems prior to the next phase of operational testing.

maintainability, built-in test, and human factors must be satisfactorily resolved for the ASPJ to become potentially suitable. Based on the test results, the Commander made the following qualified production recommendation. (The Commander's recommendation is quoted in the classified version of this report).

Based on test results for test phases IIB and IIC, the Commander, Air Force Operational Test and Evaluation Center, concluded . . . (Details pertaining to the Commander's conclusions and production recommendation are included in the classified version of this report).

Independent Assessments of ASPJ Test Phase IIB and IIC Test Results. The Director, Operational Test and Evaluation, contracted for two independent consulting firms to monitor and report on the adequacy and results of operational testing conducted by the Navy and the Air Force. (The details pertaining to the reported observations and conclusions, and recommendations made by Electronic Warfare Associates, Incorporated, the Navy operational test monitor, and the Institute for Defense Analysis, the Air Force operational test monitor, are presented in the classified version of this report).

Reasons for Extensive Purchasing Before Operational Testing. The Navy was proceeding with production of ASPJ units before successfully completing operational tests because of concerns that the vendor base for ASPJ production would dry up and about 1,000 aircraft would be awaiting ASPJ units if there was a break in the production of ASPJ units. Our audit disclosed that both concerns were overstated.

Vendor Base Dry-up. To determine the effects of a break in production on the vendor base, we performed several steps. First, we visited the two prime contractors, International Telephone and Telegraph (ITT) and Westinghouse Electronic Corporation (WEC), that were producing the ASPJ units and gathered sales data showing the extent the contractors were dependent on contracts for ASPJ units. Second, we obtained from the prime contractors lists of the vendors that the prime contractors considered critical to the production of ASPJ units. The contractors provided lists that showed a total of 15 vendors. Third, we obtained from the contractors material planning data applicable to ASPJ units and used that data to determine the extent (in dollar amounts) that those 15 vendors contributed to the production of each ASPJ unit. Fourth, from each of the 15 vendors, we requested sales data showing the extent that the vendors were dependent on ASPJ business. Last, while at the prime contractors' activities, we toured the production and assembly areas for ASPJ units and received briefings on the status of work on the contracts.

(The results of our analyses of vendor base dry-up are contained in the classified version of this report).

We believe WEC succinctly described, in a January 12, 1990 letter, the extent that the vendor base would dry up as a result of a break in production, as quoted below.

> The vendor base erosion will not necessarily be characterized by companies being shut down. Instead one should expect termination of vendor investment in the program, focusing of resources on other opportunities, and a decrease in the number of available sources . . . .

The WEC letter went on to emphasize that because of the perceived production potential for the ASPJ Program, each vendor had been willing to make an investment in terms of ASPJ dedicated teams and to share in the developmental costs. Not stated in the letter, but we believe directly implied, is the thought that these same vendors justifiably are concerned that the program continues.

Aircraft Without ASPJ Units. To determine if a break in production would result in 1,000 aircraft not having jamming capabilities, we compared contract deliveries of the ASPJ units with schedules for installing the ASPJ's in the four aircraft (AV-8B, F-14, F-16, and F/A-18) that were designated to receive ASPJ units. We also contacted using commands (Tactical Air Command and Commander Naval Air Forces, Atlantic) and non-DoD sources, such as the Association of Old Crows and the Journal of Defense for Electronic Warfare, to determine if the aircraft had alternate jamming capabilities.

(The details on our audit results concerning the number of aircraft awaiting ASPJ units are contained in the classified version of this report).

Effects of Extensive Purchasing Before Operational Testing. If the Navy continues to execute its acquisition plan for the ASPJ Program, the Navy will make two more purchases of ASPJ units before operational test and evaluation are completed. The Navy's plan provided for production decisions in May 1990 and in February 1991 on whether to buy 312 additional ASPJ units. Operational test and evaluation of ASPJ units on F-14D and F/A-18C aircraft are not scheduled to start until March 1991 and will not be completed until September 1991, about 6 months after the latter production decision. Operational test and evaluation of ASPJ units on the AV-8B aircraft are scheduled to be completed in March 1992, about 1 year after the production decision.

Purchasing additional ASPJ units prior to completion of operational test and evaluation exposes DoD to unnecessary cost risks and deployment delays, if retrofits are required to correct deficiencies identified during operational test and evaluation. We were unable to specify exactly how much cost risk the DoD would be exposed to because the Air Force has withdrawn from the ASPJ Program, and the ASPJ Program Office had not revised its acquisition plan at the time we finished the audit. However, we conservatively estimated that the Navy could have about . . . (Details on the amount that could be committed for production before the completion of operational test and evaluation are contained in the classified version of this report).

The ASPJ Program Office maintained that additional purchases would not expose the DoD to cost risks for retrofits because the contractors will agree to a conditional acceptance clause in the contracts. The Program Office explained that the Lot 1 production contracts had such a clause. The clause stated that if the delivered ASPJ units do not fully comply with the ASPJ product baseline, 3/ the units may be conditionally accepted, and the contractors will be responsible for retrofits necessary to bring the units up to the product baseline.

We do not agree with the Program Office that the conditional acceptance clause fully protects DoD against cost risks. The clause only addresses retrofits necessary to meet the product baseline. That product baseline is not specified in the contracts. Also, the clause does not state that the contractors will provide the retrofits necessary to correct deficiencies identified as a result of operational test and evaluation.

Opportunities to Reduce Cost Risks. The Navy had opportunities to minimize and reduce the cost risks on the ASPJ Program but did not take advantage of the opportunities. First, the Navy could have minimized and reduced the number of ASPJ units that were awarded on Lot 1 production contracts. On October 23, 1989, shortly after the Lot 1 production contracts were awarded, the Deputy Inspector General, DoD, issued a memorandum to the Secretary of the Navy suggesting that the Secretary reduce the ASPJ production schedule to the minimum necessary until this audit was finished and more positive test results are received (Appendix F). In support of his suggestion, the Deputy Inspector General informed the Secretary of several factors. First, we were performing an audit of Hotline allegations which alleged that the cost, performance, and reliability standards for the ASPJ had not been met. Second, documentation between top level DoD officials acknowledged that

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3/ The product baseline is represented by documentation which describes the production item in sufficient technical detail to allow reproduction.

the standards had not been met. Third, the Navy had not provided any information to the audit staff showing why it was necessary to award the Lot 1 production contracts on October 6, 1989. Last, the contract awards for Lot 1 production were contrary to DoD policy which requires major acquisition programs to meet established cost, performance, and reliability thresholds before transitioning from one milestone to the next.

The Secretary of the Navy did not adopt the Deputy Inspector General's suggestion. Navy officials informed us that, without renegotiating the prices on the Lot 1 production contracts, the Navy could only reduce the 100 units on the contracts to 82 units. Furthermore, the unit prices of those 82 units would increase.

We realized that reducing the number of units on the contracts would increase the unit prices. (Details on the unit price increases are contained in the classified version of this report). However, we considered that increase minimal in comparison to the total investment that the Navy planned for the ASPJ Program prior to the completion of operational test and evaluation. As discussed and shown previously in this finding, the Navy planned to buy as many as 416 ASPJ units in Lot 1 through Lot 3 before completion of operational test and evaluation. (The amount of ASPJ Program investment in Lot 1 through 3 is contained in the classified version of this report).

(Details explaining that the Navy had another opportunity to reduce the cost risk on the ASPJ Program when the Air Force withdrew from the program are contained in the classified version of this report. Also, the amount of costs incurred by the contractors at the time the Air Force withdrew from the program is addressed in the classified version of this report).

To enable the Navy to take advantage of the opportunity to reduce the cost risk, we met with the Program Manager for the ASPJ Program on December 21, 1989, and informed him that we thought it would be in the DoD's best interest to issue partial stop-work orders on the two contracts until a decision was made on the disposition of Air Force funded items on the contracts. We informed the Program Manager that the contractors had not released many, if any, of their purchase orders to subcontractors and that the contractors had not incurred significant amounts of cost for labor on the contracts (Appendix G). We further explained to the Program Manager that issuing stop-work orders only to halt the contractors' releases of purchase orders would provide the Navy time to make its decisions before the contractors committed substantial resources to the contracts.

The ASPJ Program Manager was not receptive to using stop-work orders. He stated that stopping work would serve no purpose because the Navy would not reduce or terminate the two contracts.

He explained that if the quantities of ASPJ units on the contracts were reduced, DoD would pay additional costs for the reduced quantities, and if the contracts were terminated, it would take the Navy 18 months to award another contract. (Additional comments by the Program Manager are contained in the classified version of this report). Additionally, he said the vendor base for ASPJ units could dry up during that 18-month period.

We disagreed with the Program Manager's assessment of the consequences that would occur if stop-work orders were used to partially stop work for the period necessary to assess the cost effects of a drastic change in the ASPJ Program. Therefore, on January 25, 1990, the Inspector General, DoD, issued a memorandum to the Secretary of the Navy informing him why we disagreed with the Program Manager. The Inspector General also suggested in the memorandum that the Navy determine the cost benefits of using stop-work orders to gain the time necessary to make a decision on the disposition of the Air Force funded items on the contracts (Appendix H).

On February 21, 1990, the Secretary of the Navy responded that it would not be in the DoD's best interest to issue stop-work orders on the Lot 1 contracts (Appendix I). The Secretary provided several reasons in support of his position. Those reasons, as well as our opinions of those reasons, are provided in Appendix J.

Need to Defer Additional Purchases. (Details on our conclusion concerning the need to defer additional purchases are included in the classified version of this report).

We realize that deferring purchases of ASPJ units in Lots 2 and 3 could substantially increase the cost of future ASPJ units if actions are not taken to prevent a break in production. With a break in production, contractors lose and must reestablish learning in their production processes. The contractors have not yet produced many ASPJ units, so the amount of learning that they have established is not yet substantial. However, if there is a break in production after the completion of Lot 1 contracts, the learning processes would be adversely affected.

To avoid the loss of learning, it will be necessary to stretch out the deliveries of ASPJ units on the Lot 1 production contracts. Based on delivery and test schedules, the deliveries would have to be stretched out only for one additional year. Specifically, the Lot 1 contracts show that the 100 ASPJ units will be delivered from December 1991 to November 1992. According to the test schedule, operational test and evaluation will be completed for the F/A-18C and F-14D aircraft in September 1991. To prevent a break in production, it will be necessary to stretch out the deliveries on the Lot 1 contracts through November 1993.

An award of a contract in November 1991 should provide for deliveries to start immediately after the last delivery on the Lot 1 contracts.

Stretching out the deliveries of ASPJ units until November 1993 will increase unit prices because 50 of the units will be delivered in 1993, and the contractors' cost for efforts in 1993 will be higher than efforts in 1992 due to inflation. However, the increases in unit prices should not be substantial. Based on analyses of cost data in the contractors' proposals, we estimated that any increases due to inflation would be about (The total amount of the increases is contained in the classified version of this report). We based our estimate on the contractors' efforts that would be stretched out for 1 additional year. Overall, our analyses showed that about 15 percent of the contractors' efforts (about $63.0 million) could extend into another year. (The total amount of the increases is contained in the classified version of this report). Additionally, unit prices could increase slightly due to increased overhead rates and smaller economies of scale. However, such increases should be negligible because the contractors have more than a year to effect any actions necessary to reduce overhead costs and the effect on economies of scale will be limited mainly to direct labor costs.

Although the unit prices will increase, we believe paying the increased prices would be preferable to buying additional ASPJ units with no assurance that such units will be operationally effective and suitable for combat. Also, paying the increased prices to stretch out the delivery schedules on the contracts could be less costly than permitting each of the contractors to establish a production base for 50 units and then having to scale the production base back to about 22 or 23 units. Since the Air Force has now withdrawn from the ASPJ Program, the number of ASPJ units that is scheduled to be procured in fiscal year 1991 will decrease to a total of 45 units. Since the existing contracts require each contractor to establish a production base to produce 50 units each, the contractors will be faced with reducing that production base by approximately one half after the completion of the Lot 1 contracts.

Deferring additional purchases of ASPJ units until successful completion of operational test and evaluation should not cause the vendor base to dry up. Also, deferring additional awards should not significantly affect operational requirements because most of the aircraft that are scheduled to use ASPJ units can use other types of protection. (Details on related test officials' recommendations are included in the classified version of this report).

In case the contractors propose unit price increases that make stretch out cost prohibitive, the Navy should develop other options that it can pursue. One option would be to permit the Lot 1 contracts to continue to completion as scheduled and wait until operational test and evaluation efforts determine whether the ASPJ units will be operationally effective and suitable for combat before awarding contracts for Lots 2 and 3. We realize that a break in production could lead to higher prices for ASPJ units due to the loss of learning. However, if the ASPJ units prove to be significantly more effective than existing jamming systems, then the higher prices would be justified. On the other hand, if the ASPJ units do not prove their worth, the Navy will not experience the higher prices because there would be no need to buy the ASPJ units.

A less desirable option that the Navy could consider would be to terminate the two Lot 1 contracts and request proposals for a reduced number of ASPJ units. We realize that such an option would not be as economical now as in December 1989, when the Air Force withdrew from the program. Contractors have purchased substantial amounts of materials and have incurred sizeable amounts of costs for labor in support of the Lot 1 contracts (See Appendix G). However, if the contractor that receives the new contract is able to use the materials that both contractors acquired, the termination costs would then be limited mainly to labor costs. Residual material resulting from a reduced quantity could be used for future contracts. Further, since one of the two contractors would receive the new contract, the labor costs that the Navy would pay in termination costs to the new contractor would not be a total loss because the contractor's past efforts should contribute to the new contract. Another benefit of this option would be that the Navy would be able to reduce DoD's total investment in a system that has not yet been proven. For example, if the Navy reduced the number of ASPJ units on the new contract to 50 units, the Navy would reduce its investment in the program by about $185.0 million. The termination option also would enable the Navy to realize the substantial economies of scale available through the use of one contractor rather than two contractors producing ASPJ units.

Of the three options that we have discussed (stretch out, completion of existing contracts, and termination), we believe the stretch out option would be the most beneficial to DoD.

RECOMMENDATIONS FOR CORRECTIVE ACTION

1. We recommend that the Under Secretary of Defense for Acquisition defer the two interim Milestone IIIA (low-rate initial production decisions) Defense Acquisition Board reviews for the Airborne Self-Protection Program until operational test and evaluation confirm the combat effectiveness and suitability of the Airborne Self-Protection Jammer.

2. We recommend that the Commander, Naval Air Systems Command revise the acquisition plan for the Airborne Self-Protection Jammer Program and renegotiate the delivery schedule for the Lot 1 production contracts so that there are no additional purchases

and no break in production of Airborne Self-Protection Jammers before the completion of operational test and evaluation. Further, if the contractors propose prohibitive stretch out costs, the Commander should take alternate actions to preclude additional purchases of Airborne Self-Protection Jammers before the successful completion of operational test and evaluation.

MANAGEMENT COMMENTS

Neither the Under Secretary of Defense for Acquisition nor the Commander, Naval Air Systems Command had provided responses on a draft of this report when we prepared this final report.

B. Independence of Operational Testers

FINDING

The Airborne Self-Protection Jammer (ASPJ) Acquisition Review Board (the Board), which was chaired by the Commander, Naval Air Systems Command, inappropriately influenced presentations to decisionmakers by directing operational testers to present favorable test results during subsequent program reviews. The ASPJ Review Board directed such action because . . . (The reason that the ASPJ Review Board directed the actions is included in the classified version of this report). Also, the minutes of the Command, Control, Communications and Intelligence (C3I) Systems Committee review, presented to the Defense Acquisition Board in June 1989, misrepresented the findings and recommendations that the tester briefed to the C3I System Committee. The minutes misrepresented the findings and recommendations because there was no requirement to coordinate the minutes with the Service test activities. We found no evidence that the operational testers changed their test reports; however, the operational test results briefed to decisionmakers were incomplete and misleading concerning the demonstrated operational performance of the ASPJ. Also, the Defense Acquisition Board was provided incomplete and misleading information to make a milestone decision for the ASPJ Program.

DISCUSSION OF DETAILS

Background. DoD Directive 5000.3, "Test and Evaluation," states that each DoD Component will establish a major field operational test agency (test agency) that will be responsible for planning and conducting all operational test and evaluation. The Directive specifies that the test agency is to be separate and independent from the developing, procuring, and using agencies. Further, the Directive states that the test agency is responsible for reporting test results and providing an evaluation of the tested system's operational effectiveness and suitability directly to the appropriate Military Department. The major field operational test agency within the Navy is the Commander, Operational Test and Evaluation Force, and within the Air Force is the Commander, Air Force Operational Test and Evaluation Center.

Secretary of the Navy Instruction 5000.1C, "Major and Non-Major Acquisition Programs," implements the DoD policy and requires that the Commander, Operational Test and Evaluation Force, provide an independent assessment of test results on major programs to the Program Manager and Program Decision Authority before the Navy Program Decision Meeting review at Milestone III production decisions.

Acquisition Review Board. On April 20, 1989, the ASPJ Acquisition Review Board, which was chaired by the Commander, Naval Air Systems Command, unduly influenced presentations to decisionmakers by directing operational testers to present favorable test results at the Navy Program Decision Meeting that was held on May 10, 1989, and at the C3I Systems Committee Review of the ASPJ Program held on May 31, 1989 (Appendix K). Specifically, the Board recommended that the two test agencies, before the next review, streamline the operational testing briefs by simplifying the technical data discussion, summarizing the results, and making clear recommendations. The Board also recommended that the testers stress the positive test results.

The Board directed this action because the two test organizations' briefings emphasized the limitations of test results obtained and identified critical operational test issues that could not be assessed because of test limitations. Another reason was that the testers did not give a clear supportive recommendation for production of Lot 1.

Navy Program Decision Meeting. When the ASPJ program was presented to the Navy Program Decision Meeting on May 10, 1989, the Navy operational tester briefed streamlined operational test results but still provided meeting attendees essential information on ASPJ operational test limitations. However, the Navy operational tester's briefing charts did not address the effect of the test limitations on the resolution of 10 critical operational issues (both effectiveness and suitability issues) that were briefed as partially resolved because of test limitations.

C3I Systems Committee Review of the ASPJ Program. The briefing charts that Navy officials used at the C3I Systems Committee Review of the ASPJ Program on May 31, 1989, did not show test limitations affecting the test results and did not identify critical operational test issues that had not been resolved. As a consequence, the C3I Systems Committee was presented incomplete and misleading test results on the operational performance of the ASPJ units. Specifically, the Navy's operational tester did not indicate the limitations of quantitative test results obtained in reporting ASPJ units' performance for 9 of the 20 critical operational issues to be resolved or partially resolved before the production decision was made. (Details on the tester's presentation are included in the classified version of this report).

Accordingly, we concluded that operational test information briefed at the ASPJ's C3I Systems Committee Review was more favorable than warranted by the test results. Based on available documentation and our discussions with responsible operational testers, we determined the test information was presented in a more favorable way because of the Navy acquisition authorities' influence.

Minutes of the ASPJ C3I Systems Committee Review. The minutes of the ASPJ C3I Systems Committee Review showed that the . . . (The details on the quotation attributed to the Navy operational tester are included in the classified version of this report.)

We asked the Navy operational tester about this statement. The Navy operational tester said the minutes of the C3I Systems Committee review did not accurately summarize the tester's presentation. Specifically, the tester did not state that the ASPJ satisfied most of the testing requirements. Further, the tester stated that the Commander, Operational Test and Evaluation Force made a qualified production recommendation. The Navy operational tester also stated that the Executive Secretary of the C3I Systems Committee did not coordinate with or provide to the testers the minutes before the Defense Acquisition Board ASPJ Program Review in June 1989.

Accordingly, the minutes of the C3I Systems Committee Review misinformed the Defense Acquisition Board of the operational testers' findings and recommendations.

Need to Prevent Undue Influence. To prevent recurrences of officials influencing the independence of operational testers, we believe the DoD should reemphasize the need and importance of independent test and evaluation results to acquisition decision-makers. Also, to attain complete and accurate presentations of test results to the Defense Acquisition Board, DoD needs to establish a coordination process that provides for testers to verify the completeness and accuracy of test information included in program review minutes.

RECOMMENDATIONS FOR CORRECTIVE ACTION

We recommend that the Under Secretary of Defense for Acquisition:

1. Reemphasize to acquisition managers the necessity and the importance of independent test and evaluation efforts in the acquisition decisionmaking process and direct the managers not to influence or attempt to influence the objectivity and completeness of test results presented to decisionmakers.

2. Establish guidance that requires coordination of program review minutes with operational testers before the minutes are presented to the Defense Acquisition Board.

MANAGEMENT COMMENTS

The Under Secretary of Defense for Acquisition had not provided comments on a draft of this report when we prepared this final report.

C. Program Costs

FINDING

The Airborne Self-Protection Jammer (ASPJ) Program Office did not take appropriate action to resolve a $1.3 billion to $1.6 billion cost estimating difference with the OSD Cost Analysis Improvement Group (CAIG) because it assigned a low priority to the effort. Specifically, the Program Office did not meet with CAIG officials to resolve specific cost differences, did not respond to a CAIG request for cost data supporting claimed competition savings, and did not develop a complete estimate of operating and support costs. As a result, the ASPJ Program's cost estimate may be significantly understated in the DoD and the President's budget.

DISCUSSION OF DETAILS

Background. United States Code, title 10, section 2434, "Independent Cost Estimates; Operational Manpower Requirements," requires an independent estimate of the cost of a major defense acquisition program before the Secretary of Defense may approve the program for full-scale engineering development, production, and deployment. The independent estimate must be made by an office that is not under the supervision, direction, or control of the Military Department that is directly responsible for carrying out the development or acquisition of the program. Further, section 2434 states that the independent estimate must include all life-cycle costs, including the cost of research and development efforts, hardware and related costs, and elements of operating and support costs.

DoD Directive 5000.4, "OSD Cost Analysis Improvement Group," October 30, 1980, requires the CAIG to provide the Defense Acquisition Board with a review and evaluation of independent and program office cost estimates prepared by the DoD Components for presentation at Defense Acquisition Board reviews. The CAIG reviews should consider all elements of system life-cycle costs, including research and development, investment, and operating and support. DoD Directive 5000.4 does not address resolution of differences between the CAIG's estimate and the Program Office's cost estimate.

Hotline Complaints. A Hotline complaint to the Inspector General, DoD, dated August 23, 1989, alleged that the Office of the Assistant Secretary of Defense (Program Analysis and Evaluation) determined that the life-cycle costs for the ASPJ Program were understated by $1.3 billion to $1.6 billion. A second Hotline complaint to the Inspector General, DoD, dated October 4, 1989, alleged that the life-cycle cost of the . . . (Details on life-cycle costs are contained in the classified version of this report).

To determine the validity of the Hotline complaints, we:

- obtained and reviewed laws and DoD regulations concerning independent cost estimates, reviews and evaluations of independent and Program Office cost estimates, and the resolution of any differences in the estimates;

- obtained and reviewed the Program Office and CAIG estimates and determined the specific differences between the two estimates;

- determined actions taken by the CAIG and Program Office to resolve significant estimating differences, determined whether such differences had in fact been resolved, and determined the dates of any planned resolution actions; and

- determined congressional reporting requirements and reviewed applicable Program Office reports.

Validity of Hotline Complaints. We determined that the initial allegation was valid. The CAIG life-cycle cost estimate for the ASPJ Program, dated May 25, 1989, exceeded the Program Office's estimate by $1.3 billion to $1.6 billion. (Details on the CAIG and ASPJ Program office's life-cycle cost estimates are contained in the classified version of this report). The CAIG's estimate showed that the Program Office's estimate was understated in five areas. Those areas, as well as the amounts of the understatements in the areas, are shown below:

Area	($ Million) Amount Understated From	 To
Research, Development, Test and Evaluation		
Preplanned Product Improvement	$ 138	$ 138
Procurement		
Competition Savings from Dual Sourcing	500	500
Initial Spares Requirements	127	127
Operating and Support		
Condemnation Rates on Tubes	300	600
Spares Reprocurement	200	200
Total	$1,265	$1,565

As shown above, the primary areas of difference were in the procurement estimate ($627 million) and the operating and support estimate ($500 million to $800 million). The principal procurement estimate cost issue ($500 million) concerned estimated savings from dual sourcing ASPJ acquisitions. The two principal operating and support cost issues were condemnation rates for traveling wave tubes ($300 million to $600 million) and spares reprocurement costs ($200 million). The CAIG report indicated that the condemnation rate for traveling wave tubes would be significantly higher than the Program Office's estimate; the CAIG computed a $300 million to $600 million increase over the Program Office estimate because of the use of higher condemnation rates for traveling wave tubes. The CAIG estimated that the cost to procure spares after full-scale production would be significantly higher than the Program Office's estimate; the CAIG computed a $200 million increase over the Program Office's estimate because of the higher costs to procure the spares.

The Navy presented the estimating differences to the Defense Acquisition Board as part of the production decision review conducted on June 12, 1989. In the Acquisition Decision Memorandum, dated August 16, 1989, the Deputy Secretary of Defense directed the Secretary of the Navy and the Secretary of the Air Force to resolve open cost issues before the next scheduled milestone date, October 1, 1990. Defense Acquisition Board documentation is required 60 days before the scheduled review. Specifically, the Deputy Secretary stated that:

- the Navy will work with the CAIG to resolve the funding differences between the CAIG and the ASPJ Program Office;

- the Navy and Air Force shall define the Preplanned Product Improvement Program and include appropriate funding in the FY 1992 Program Objective Memorandum for the ASPJ P3I Program; and

- the ASPJ Program Office shall provide a detailed cost analysis showing the cost-effectiveness of continuing with two sources and report these findings to the Defense Acquisition Board through an updated Acquisition Strategy Report before the release of the Lot II production contract solicitation.

Concerning the second Hotline complaint, we determined that the allegation was not valid. As discussed previously, neither the CAIG estimate nor the Program Office estimate approximated the $10 billion life-cycle cost figure cited in the complaint. In addition, the complainant's stated baseline figure of . . . (The baseline figure is contained in the classified version of this report) . . . appears to cover only the procurement cost category. Therefore, we believe the complainant made an invalid comparison between life-cycle costs and procurement costs.

Navy Resolution Efforts. The audit disclosed that the Program Office did not actively pursue resolution of the cost estimating difference of $1.3 billion to 1.6 billion. The Program Office did not initiate meetings with the CAIG to discuss or resolve any specific cost estimating difference. Program

Office officials told us that they had held informal discussions at unspecified times with CAIG officials to develop strategy to resolve differences before the next scheduled Defense Acquisition Board milestone meeting. The Program Office did not document the dates or the substance of the meetings. Program Office officials also told us that further discussions were unnecessary because Congress did not appropriate funds for FY 1990 production of ASPJ units and the Air Force withdrew from the ASPJ Program on December 11, 1989. We agree that these events have affected the cost issues; however, the events did not, in our opinion, lessen the need to resolve the underlying reasons for cost estimating differences. The Navy still needs to resolve the cost issues for reasons that are discussed in the following sections.

Competition Savings. The Program Office did not respond to a CAIG request for additional information concerning the Program Office's estimate of competition savings from dual sourcing the ASPJ Program. On October 3, 1989, the CAIG asked the Program Office to provide detailed information (such as learning curves, cost estimating relationships, and model programs used to compute the savings) supporting its estimate of competition savings. A CAIG official told us that the Program Office had not submitted the requested data. The CAIG official also said that the need for the requested data was currently moot because of the restructured program. However, we believe that the underlying reasons for the cost estimating differences of competition savings ($500 million) should be resolved. The resolution process may benefit the ASPJ Program because the ASPJ Program Office had not yet revised its acquisition strategy.

Operating and Support Costs. The Program Office did not develop a complete estimate of operating and support costs. At the completion of audit field work, the Program Office was still in the process of revising its estimate of condemnations for traveling wave tubes. A Program Office official told us that the Program Office was in the process of obtaining data from a Navy activity to compute the estimated condemnation rate for traveling wave tubes used in ASPJ units. According to Program Office officials, preliminary analysis indicated that their revised estimated condemnation rate for traveling wave tubes would be substantially less than the CAIG estimate. The Program Office did not address and was not aware of the amount of the other principal operating and support cost issue, spares reprocurement cost. We obtained the amount of operating and support costs applicable to spares reprocurement (about $200 million) from CAIG officials. We believe that the operating and support cost issues should be promptly resolved to develop an accurate estimate of the cost of the restructured ASPJ Program.

On a more positive note, the Program Office took several steps to define the Preplanned Product Improvement Program; however, the Program Office had not estimated the costs for the Preplanned Product Improvement Program.

Program Office officials told us that they expected to have firm estimates for all outstanding cost issues by May 1990. However, the Program Office stated that its estimate of operating and support costs will still be significantly less than the CAIG estimate. In addition, the Program Office will need to resolve estimating differences for dual sourcing if the Program Office decides to propose dual sourcing of the restructured ASPJ Program.

Resolution Procedures. The Navy assigned a low priority to the resolution of the cost estimating difference primarily because there were no specific procedures, such as statutory provisions or DoD regulations, to resolve the cost estimating differences. The Program Office had taken minimal steps to resolve the differences as discussed in the preceding sections. The Acquisition Decision Memorandum, dated August 16, 1989, provided a deadline for resolving the differences but did not provide a timetable and agenda for doing so. While the audit scope was not designed to review the need for such procedures, the audit results showed the need for more emphatic direction to the Navy concerning resolution of the ASPJ cost estimating differences.

Impact of Not Resolving Open Cost Issues. As a result of the lack of progress in resolving the CAIG and Program Office cost estimating differences, the Navy's Program Objective Memorandums and the DoD and President's budget for the ASPJ Program may be understated. The Navy needs to resolve cost differences immediately to avoid criticism of DoD's cost estimating methodology and to achieve realistic budgetary requirements for the ASPJ Program.

RECOMMENDATIONS FOR CORRECTIVE ACTION

We recommend that the Under Secretary of Defense for Acquisition:

1. Direct the Airborne Self-Protection Jammer Program Office and OSD Cost Analysis Improvement Group to immediately identify differing cost estimating assumptions having major cost impact, develop an agenda and timetable for resolving the specific differences, and resolve the differences by August 1, 1990.

2. Direct the Command, Control, Communications and Intelligence Systems Committee of the Defense Acquisition Board to review, approve, and monitor the agenda for resolving specific cost estimating differences.

MANAGEMENT COMMENTS

The Under Secretary of Defense for Acquisition had not provided comments on a draft of this report when we prepared this final report.

SUMMARY OF HOTLINE ALLEGATIONS

Initial Allegations. On August 23, 1989, the Office of the Director for the DoD Hotline received allegations concerning the ASPJ Program (Hotline Case No. 89-T46044). The complainant alleged that the Milestone IIIA Defense Acquisition Board review for the ASPJ had erroneously resulted in the approval of low-rate initial production. On September 8, 1989, the Office of the Assistant Inspector General for Auditing initiated an audit to determine the validity of the allegations. The results of the audit are summarized below.

o Allegation. The Deputy Secretary of Defense ignored cost and test data when making the limited-rate initial production decision. Our audit showed that the Deputy Secretary of Defense (DEPSECDEF) did not ignore the cost and test data presented at the Defense Acquisition Board (DAB) review. In the August 1989 Acquisition Decision Memorandum (ADM), the DEPSECDEF specifically directed that the cost and test issues be resolved. Our audit disclosed that the DEPSECDEF's decision to allow award of the Lot 1 ASPJ contracts was heavily swayed by the the Navy's arguments regarding the potential for dry-up of the vendor support base for the program and that 1,000 aircraft would be awaiting ASPJ units if the Lot 1 production contracts were not awarded. Our audit disclosed that those arguments were unjustified as discussed in the following two subparagraphs.

Vendor Base Dry-up. To determine the effects of a break in production on the vendor base, we performed several steps. First, we visited the two prime contractors, International Telephone and Telegraph (ITT) and Westinghouse Electronic Corporation (WEC), that were producing the ASPJ units and gathered sales data showing the extent the contractors were dependent on contracts for ASPJ units. Second, we obtained from the prime contractors lists of the vendors that the prime contractors considered critical to the production of ASPJ units. The contractors provided lists that showed a total of 15 vendors. Third, we obtained from the contractors material planning data applicable to ASPJ units and used that data to determine the extent (in dollar amounts) that those 15 vendors contributed to the production of each ASPJ unit. Fourth, from each of the 15 vendors, we requested sales data showing the extent that the vendors were dependent on ASPJ business. Last, while at the prime contractors' activities, we toured the production and assembly areas for ASPJ units and received briefings on the status of work on the contracts.

(Details on our analyses of vendor base dry-up and audit conclusions are contained in the classified version of this report).

SUMMARY OF HOTLINE ALLEGATIONS (Continued)

Aircraft Awaiting ASPJ Units. To determine if a break in production would result in 1,000 aircraft awaiting ASPJ units, we compared contract deliveries of the ASPJ units with schedules for installing the ASPJ units in the four aircraft (AV-8B, F-14D, F-16C, and F/A-18C) that were designated to receive ASPJ units. We also contacted using commands (Tactical Air Command and Commander Naval Air Forces, Atlantic) and non-DoD sources, such as the Association of Old Crows and the Journal of Defense for Electronic Warfare, to determine if the aircraft had alternate jamming capabilities.

(The details on the number of aircraft awaiting ASPJ units are contained in the classified version of this report. Further details on test officials' recommendations are contained in the classified version of this report).

- Allegation. The ASPJ did not meet effectiveness and suitability requirements. Our audit disclosed that the allegation was valid. The Navy and Air Force operational test and evaluation reports confirmed this allegation. The Navy report stated that the ASPJ was only marginally operationally effective and marginally operationally suitable. (The details pertaining to the Air Force testers' conclusions are included in the classified version of this report.)

- Allegation. Program cost was understated by $1.3 billion to $1.6 billion. Our audit disclosed that the allegation was potentially valid. The OSD Cost Analysis and Improvement Group (CAIG) concluded that the life-cycle cost estimate presented by the Program Office was understated by $1.3 billion to $1.6 billion. The Acquisition Decision Memorandum (ADM) issued in August 1989 specified that the Program Office and the CAIG were to resolve the cost differences by the next milestone review. The next review was scheduled for October 1990. We found that the Program Office and the CAIG had not resolved thecost issues. Furthermore, little preparatory effort had been taken to resolve the issues. A detailed presentation of this is in Finding C.

Supplemental Allegations. On October 4, 1989, an anonymous DoD Hotline caller alleged that Navy officials' claims regarding the ASPJ, as reported in an *Air Force Times* news article, were inaccurate. The Hotline caller's allegations and the results of our review are as follows.

- Allegation. The Hotline caller alleged that the Navy stated that no additional ASPJ systems would be bought until further testing was conducted. The caller also claimed that the system was in low-rate initial production and 100 to 200 units

SUMMARY OF HOTLINE ALLEGATIONS (Continued)

could be purchased without further testing. The allegations were partially valid. The Navy acquisition program, at the time of the news article, called for three low-rate initial production decision reviews prior to completion of operational test and evaluation. The full-rate production decision was not planned until after operational test and evaluation had been completed. The total quantity to be awarded under low-rate initial production decision criteria was 412 units. A more detailed discussion of this issue is presented in Finding A.

- Allegation. The Hotline caller alleged that the Navy claimed that test data on the ASPJ showed the system to be sufficiently reliable while the Navy's formal test data showed the ASPJ to be totally unreliable. We found that the allegation was partially valid. The news article cited Senator Pryor as stating that the system . . . "failed on effectiveness standards . . . and failed on suitability standards . . ." and that the Navy countered by stating that "Reliability data shows at this stage it (ASPJ) is sufficiently reliable." Neither Senator Pryor's comments nor the Navy spokesperson's comments used generally accepted terminology in addressing the results of the Navy's tests. The Navy test report stated that the ASPJ was marginally operationally effective and marginally operationally suitable. The formal Navy results did not necessarily support either comment. (Details on our audit conclusion are included in the classified version of this report.)

- Allegation. The Hotline caller alleged that the Navy claimed the joint tests were mismanaged and the mismanagement resulted in the failure of the system. The caller also alleged that the Navy claimed that the tests were applied improperly. During our audit, we found no indication that the tests were mismanaged or that the tests were applied improperly. We were informed by the ASPJ Program Office that additional test criteria (Measures of Effectiveness) should be developed and applied during further tests. A Navy study group was, at the time of audit, developing new criteria. It should also be noted that the test criteria used by Navy and Air Force testers during the last operational evaluation were developed and approved by the users, testers, Program Office, and the OSD Director, Operational Test and Evaluation.

- Allegation. The caller alleged that the "Testers" reported one thing and the Program Office said something entirely different. We found this allegation to have some merit. The charts prepared by the Program Office for presentation to both the Command, Control, Communications and Intelligence System Committee and the Defense Acquisition Board concentrated on presenting the positive aspects of the ASPJ Program. The charts

SUMMARY OF HOTLINE ALLEGATIONS (Continued)

did not fully present the deficiencies that had been identified in the Navy and Air Force test reports. Detailed results of our review in this area are contained in Finding B.

- Allegation. The caller alleged that life-cycle costs for the ASPJ Program were likely to exceed $10.0 billion instead of the $4.8 billion shown in the news article. The allegation was partially valid. Our audit of Program Office's and the Cost Analysis Improvement Group's estimates disclosed . . . (Our conclusion is contained in the classified version of this report). These cost estimates were presented during the Defense Acquisition Board review. We also concluded that the . . . (The details on the audit conclusion are contained in the classified version of this report). Life-cycle costs and procurement costs are not directly comparable. Life-cycle cost estimates include research, development, test and evaluation costs; operation and support costs; and procurement costs. Detailed results of our review in this area are contained in Finding C.

SYNOPSES OF PRIOR AUDIT COVERAGE

"Electronic Warfare: Status of the Airborne Self-Protection Jammer Program," General Accounting Office Report No. NSIAD-89-3 (OSD Case No. 7730) November 4, 1988. The report concluded that the Airborne Self-Protection Jammer Program (ASPJ): is not ready to enter full-rate production because the testing program has been delayed and operational testing just began in mid-June 1988; cost estimating methodology was reasonable but costs were likely to change; may become DoD's most capable jammer but it will not counter all threats; may not receive continued joint Services commitment from the Navy and Air Force; and should be carefully monitored by Congress. OSD concurred or partially concurred with all but one of the General Accounting Office's conclusions. With regard to the joint Service commitment, OSD stated that the Services were committed to the ASPJ, and that the commitment was affirmed by the September 1988 Defense Acquisition Board. In addition, while the Program Objectives Memorandum-90 provided for reduced procurement, the reduction was attributable to the corresponding reduction in the procurement of host aircraft.

"DoD Acquisition Programs: Status of Selected Systems," General Accounting Office Report No. NSIAD-88-160 (OSD Case 7590) June 30, 1988. The report concluded that the ASPJ is about 5 years behind schedule, and the developmental and operational tests have limitations that may hamper an accurate assessment of the ASPJ's performance. These limitations include: the ASPJ version presently being tested is an early developmental model, not the current production verification unit; the aircraft being used to test the ASPJ are not of the appropriate configuration; and the threat simulators that the ASPJ is tested against are not of the latest capabilities or densities. The General Accounting Office made no recommendations and OSD did not respond to the report.

"An Opportunity to Reduce Proliferation and Improve Acquisition Strategy for Electronic Combat Jammers," General Accounting Office Report No. NSIAD-86-1 (OSD Case No. 6535) October 8, 1985. The report concluded that the Air Force and the Navy plan to spend billions of dollars acquiring the ALQ-131, ASPJ, and other jamming systems to meet a common threat. One common jammer in both external pod and internal configurations could satisfy inter-Service needs for tactical fighter aircraft. The report also concluded that the Air Force had not taken advantage of opportunities to reduce proliferation of jamming systems and had not sought to correct reliability and maintainability problems of existing systems in follow-on production. The General Accounting Office made no recommendations and OSD did not respond to the report.

CRITICAL OPERATIONAL ISSUES

Effectiveness Issues

1. Detection and Identification. (The details pertaining to this critical operational issue are included in the classified version of this report).

2. Prioritization. Will the ASPJ properly prioritize threat emitters in a multi-signal environment?

3. Technique Assignment. Will the ASPJ assign the proper electronic countermeasures technique?

4. Response. Will the ASPJ assign response in a timely manner in a dense and changing threat environment to confuse enemy radar operators and degrade or deny tracking accuracies of surface-to-air missiles, antiaircraft artillery, and airborne interceptor threat systems?

5. Survivability. Will the ASPJ increase aircraft survivability against enemy air defense systems (radio frequency)?

6. Electronic Counter-Countermeasures (ECCM) Susceptibility. Will the ASPJ be susceptible to enemy ECCM?

7. User Data File (UDF) Reprogrammability. (The details pertaining to this critical operational issue are included in the classified version of this report).

Suitability Issues

1. Reliability. Will the reliability of the ASPJ support completion of the host aircraft mission?

2. Maintainability. Will the ASPJ be maintainable by fleet personnel in an operational environment?

3. Availability. Will the availability of the ASPJ support completion of the host aircraft mission?

4. Logistic Supportability. Will the ASPJ be logistically supportable?

CRITICAL OPERATIONAL ISSUES (Continued)

Suitability Issues (continued)

5. Compatibility. Will the ASPJ be physically compatible with its operating environment, to include on-board weapon systems?

6. Interoperability. Will the ASPJ be interoperable with the systems with which it must interface?

7. Training. Will ASPJ training support system operation and maintenance by fleet personnel?

8. Human Factors. Will the human factors' aspects of the ASPJ support completion of the host aircraft mission?

9. Safety. Will the ASPJ be safe to operate and maintain?

10. Documentation. Will the technical documentation support operation and maintenance of the ASPJ?

11. Built-in Test (BIT). Will the ASPJ BIT be capable of accurate fault detection, fault isolation, and display of system failures?

12. UDF Reloadability. Will the ASPJ UDF be reloadable in an operational environment?

13. Software Maintainability. Is the system software and associated documentation structured to permit easy installation of required changes and enhancements?

TEST LIMITATIONS

Test Limitations Identified in the Airborne Self-Protection Jammer (ASPJ) Test and Evaluation Master Plan

1. The ASPJ full-scale development model to be tested will preclude formulation of conclusions regarding operational effectiveness or suitability performance until testing of a production representative system - Air Force only (Reliability, Maintainability, Availability, and Built-in Test).*

2. Lack of suitable simulators will preclude testing against all threat signals contained in the ASPJ System Threat Assessment Report (Detection and Identification, Prioritization, Technique Assignment, Response, Survivability, and Electronic Counter-Countermeasures (ECCM) Susceptibility).*

3. The maximum signal handling capability of the system will not be operationally flight tested because of the limited number of emitters at any one range facility. This capability will be assessed in a hybrid laboratory environment at the Air Force Electronic Warfare Evaluation Simulator (Detection and Identification, Prioritization, Technique Assignment, Response, Survivability, and ECCM Susceptibility).*

4. Navy and Air Force software support facilities will not be available for evaluation. This will preclude complete evaluation of ASPJ reprogramming capability (User Data File (UDF) Reprogrammability).*

5. User data file generator delivery is scheduled to coincide with arrival of ASPJ production verification units, and the Standard Memory Loader Verifier will not be available for evaluation (UDF Reloadability and UDF Reprogrammability).*

6. Production representative operational-level support equipment and technical data will not be available. The contractor will provide intermediate-level maintenance and support equipment for the Air Force test allowing an Air Force technician to observe. Intermediate-level maintenance and support equipment will be provided to the Navy testers but it will be incompatible with production verification unit testing (Logistic Supportability).*

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* In parenthesis after each test limitation is the critical operational issue(s) that were not resolved because of the test limitation.

TEST LIMITATIONS (Continued)

7. (The details pertaining to this test limitation are included in the classified version of this report). (Detection and Identification, Prioritization, Technique Assignment, Response, Survivability, and Electronic Counter-Countermeasures (ECCM) Susceptibility).*

8. (The details pertaining to this test limitation are included in the classified version of this report). (Detection and Identification, Prioritization, Technique Assignment, Response, Survivability, and ECCM Susceptibility).*

9. Air Force flight tests will be conducted on modified F-16A aircraft. (The details pertaining to this test limitation are included in the classified version of this report). (Interoperability).*

10. (The details pertaining to this test limitation are included in the classified version of this report). (Detection and Identification, Prioritization, Technique Assignment, Response, Survivability, and ECCM Susceptibility).*

11. (The details pertaining to this test limitation are included in the classified version of this report). (Survivability and ECCM Susceptibility).*

12. (The details pertaining to this test limitation are included in the classified version of this report). (Compatibility and Interoperability).*

13. (The details pertaining to this test limitation are included in the classified version of this report). (Detection and Identification, Prioritization, Technique Assignment, Response, Survivability, and ECCM Susceptibility).*

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* In parenthesis after each test limitation is the critical operational issue(s) that were not resolved because of the test limitation.

TEST LIMITATIONS (Continued)

Other Test Limitations Identified in the Navy Initial Operational Test and Evaluation Report on the ASPJ

1. Navy flight tests were conducted on modified F/A-18A aircraft. (The details pertaining to this test limitation are included in the classified version of this report). (Interoperability).*

Other Test Limitations Identified in the Air Force Initial Operational Test and Evaluation Report on the ASPJ

1. Limitations of test range instrumentation in terms of time-space position information accuracy prevented tactically representative altitudes from being flown at the test range. This precluded an evaluation of low-altitude operations (Detection and Identification, Prioritization, Technique Assignment, Response, Survivability, and ECCM Susceptibility).*

2. Limitations of test range instrumentation . . . (The details pertaining to this test limitation are included in the classified version of this report). (Survivability and ECCM Susceptibility).*

3. Software documentation was too generalized to assist potential software changes at the module level. This precluded an evaluation of the maintainability of ASPJ software (Software Maintainability).*

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* In parenthesis after each test limitation is the critical operational issue(s) that were not resolved because of the test limitation.

STATUS OF RESOLUTION OF CRITICAL OPERATIONAL ISSUES AS OF MAY 31, 1989

Airborne Self-Protection Jammer Critical Operational Issues	Status F/A-18C	Status F-16C
Effectiveness Issues		
1. Detection and Identification	C	C
2. Prioritization	C	C
3. Technique Assignment	C	C
4. Response	C	C
5. Survivability	C	C
6. Electronic Counter-Countermeasures Susceptibility	C	C
7. User Data File (UDF) Reprogrammability	C	C
Suitability Issues		
1. Reliability	C	C
2. Maintainability	U, N/A	U, N/A
3. Availability	U, N/A	U, N/A
4. Logistic Supportability	U, N/A	U, N/A
5. Compatibility	U, N/A	U, N/A
6. Interoperability	U, N/A	U, N/A
7. Training	U, S	U, N/A
8. Human Factors	U, F	U, N/A
9. Safety	U, S	U, N/A
10. Documentation	U, S	U, N/A
11. Built-in Test (BIT)	C	C
12. UDF Reloadability	U, N/A	U, N/A
13. Software Maintainability	U, N/A	U, N/A

Definitions of status codes:

F - Limited test results did not meet user requirement.
S - Limited test results met user requirement.
U - Unresolved by tester because of test limitations.
N/A - Not assessed by tester because of test limitation(s).
C - Status codes pertaining to this critical operational issue are included in the classified version of this report.

INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
400 ARMY NAVY DRIVE
ARLINGTON, VIRGINIA 22202-2884

OCT 23 1989

MEMORANDUM FOR SECRETARY OF THE NAVY

SUBJECT: Proposed Response to Senator Pryor's and Senator Grassley's Letter on the Airborne Self Protection Jammer

I reviewed the proposed response to Senators Pryor and Grassley and nonconcur with it. My reasons follow.

We are currently conducting an audit of the Airborne Self Protection Jammer (ASPJ) program based on allegations that cost, performance, and reliability standards have not been met. There is evidence that the ASPJ program has not achieved desired performance despite 13 years of development effort. In a memorandum of July 25, 1989, the Under Secretary of Defense for Acquisition informed the Deputy Secretary of Defense that "Test data compiled to date indicates that ASPJ represents a modest advance over already fielded and less costly jammings devices." The Under Secretary also stated that "The CAIG believes that program costs are underestimated by at least $1B." Additionally, in a July 31, 1989 memorandum to the Under Secretary of Defense for Acquisition, the Deputy Secretary of Defense stated that the ASPJ was "...a clear case of not meeting the exit criteria established for transition from the Full Scale Development Phase to the Production Phase."

Also, in our opinion, the Navy has not shown to date why it was necessary to award a contract on October 6, 1989 for 100 ASPJ units. According to the Under Secretary of Defense for Acquisition July 25, 1989 memorandum, it was necessary to award the contract to prevent a "dry-up" of the vendor support base needed by the prime contractors. However, our ongoing audit has been unable to find data supporting the claim. Furthermore, the Navy ASPJ Program Office informed us that a more overriding reason for having to award the contract on October 6, 1989 was because there were operational needs for the ASPJ units to be placed in aircraft. The Program Office has been unable to show precisely what the operational impact would be from not having 100 ASPJ units. The auditors are still looking into the operational impact. Preliminary results, however, indicate that 100 units will not, even if their performance is eventually demonstrated to be significantly superior to existing systems, substantially impact a program the size of the ASPJ. Adverse impact from buying fewer than 100 units would be short-lived because increased production following successful testing could bring the program back on schedule quickly.

Further, we believe the contract award was contrary to recently issued DoD policy guidance. According to the Defense Management Report, dated July 12, 1989, major acquisition programs must meet established cost, performance and reliability thresholds before systems can transition from one milestone to the next. Although the procurement quantity of 100 units has been described as low-rate initial production, it was in fact the second award for production verification (PV) units. The first contract for 20 PV units was awarded in August 1987. Deliveries on that contract are expected between November 1989 and April 1991. The ASPJ Program Office presentation to the DAB on November 10, 1986, indicated that award of the initial PV contract would allow the prime contractors to demonstrate that they could build a complete system and provide an adequate number of units to conduct operational test and evaluation. At the present time, neither contractor has independently accomplished production of a complete PV unit and no operational testing has occurred using a production unit.

In consideration of the factors addressed above, I believe it would be in the DoD best interest to reduce the ASPJ production schedule to the minimum necessary until our audit is completed and more positive test results are received. Unless the ASPJ Program Office can show unacceptable erosion of the vendor support base, significant adverse operational impacts or cost consequences from reducing production, I believe the contracted quantities should be reduced to the lowest award options. The contractors' proposals contained options for contract awards of 19 and 22 units (41 units in total). My assessment is that reducing the quantities would help ensure the viability of the vendor support base, if that is in fact a real problem, and not effect operational requirements while greatly reducing the risk of costly modifications or having units that may have to be scrapped once developmental and operational tests are completed.

Derek J. Vander Schaaf
Deputy Inspector General

COSTS INCURRED AND FINANCIAL COMMITMENTS ON LOT 1 PRODUCTION CONTRACTS

THE CONTENTS OF THIS APPENDIX ARE CONTAINED IN THE CLASSIFIED VERSION OF THIS REPORT. THE APPENDIX CONTAINED CONTRACTOR PROPRIETARY DATA.

INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
400 ARMY NAVY DRIVE
ARLINGTON, VIRGINIA 22202-2884

JAN 25 1990

MEMORANDUM FOR SECRETARY OF THE NAVY

SUBJECT: Audit of Hotline Allegations Regarding the Milestone IIIA Production Decision for the Airborne Self-Protection Jammer Program (Project No. 9AE-8008)

As part of the subject audit, we identified a matter that will provide you an opportunity to minimize the cost effects of the Air Force withdrawal from the Airborne Self-Protection Jammer (ASPJ) Program. In doing so, you could possibly save the DoD millions of dollars. To minimize the cost effects, partial stop-work orders on two ASPJ Lot 1 production contracts will be necessary to acquire the time needed to assess the effects of the Air Force withdrawal from the program. We believe the use of partial stop-work orders of 30 to 90 days would have minimal effects on the contractors' efforts, as well as on the cost and delivery schedules of ASPJ units on the contracts.

The ASPJ Program Manager was not receptive to using stop-work orders. He stated that stopping work would serve no purpose because the Navy would not reduce or terminate the two contracts. He explained that if the quantities of ASPJ units on the contracts were reduced, DoD would pay additional costs for the reduced quantities, and, if the contracts were terminated, it would take the Navy 18 months to award another contract. He added that an 18-month delay would significantly affect operational requirements because ASPJ units would not be available for installation in aircraft. It is also claimed that the vendor base for ASPJ units could dry up during that 18-month period.

We believe that some of the Program Manager concerns are valid. However, we disagree with his using those concerns to dismiss the need for and value of determining whether it would be cost beneficial to partially stop work and assess the cost effects of a major change in the ASPJ Program. Over $400 million is at stake. The Air Force withdrawal eliminates about 60 percent of the ASPJ Program requirements. With such a major reduction in the ASPJ Program, the Navy must determine whether it is cost-effective to proceed with two contractors. If it is not cost-effective to continue with two contractors, the Navy will need to decide now to avoid the higher unit prices resulting from using two production contractors rather than one contractor to produce the 100 or fewer ASPJ units. The Navy also needs to know whether the Air Force-funded ASPJ units will remain on the contracts. If the Air Force requirement is terminated, how much will the termination cost, and how much will the cost of the remaining ASPJ units increase?

The potential for achieving economical stop-work orders is high. If the stop-work orders are limited to halting the contractors' releases of purchase orders and subcontracts, the contractors should not incur substantial costs during the 30 to 90 day period. We estimate that the contractors are incurring costs of approximately $125,000 to $150,000 per month. If our estimate is indicative of the cost during a 30-day partial work stoppage, issuing stop-work orders would appear to be an economical action.

Stop-work orders should not seriously disrupt the contractors' efforts. The contractors plan to release purchase orders and subcontracts from January to March 1990 for the materials and services needed to produce the ASPJ units. Therefore, the contractors have not yet committed significant efforts to the contracts.

Stop-work orders also should not significantly affect the contract delivery schedules for ASPJ units on the contracts. Issuing the stop-work orders should not delay the delivery of ASPJ units any longer than the periods of the stop-work orders.

Considering the significance of the decisions pending on the ASPJ Program as a result of the Air Force withdrawal, we suggest that the Navy determine whether it would be cost beneficial to use partial stop-work orders to gain the time needed to gather information and to decide the future strategy for the ASPJ Program. We also suggest that, if partial stop-work orders are acceptable from a cost viewpoint, the Navy direct that the partial stop-work orders be issued because the contractors are in the process of releasing purchase orders.

I would appreciate receiving your comments on any actions you may consider on the two contracts by February 1, 1990. Please contact me or Mr. Rayburn Stricklin on 694-3965 if we can be of assistance to you.

Susan J. Crawford

Susan J. Crawford
Inspector General

cc:
Secretary of the Air Force
Under Secretary of Defense for Acquisition

DEPARTMENT OF THE NAVY
OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20350-1000

21 February 1990

MEMORANDUM FOR THE INSPECTOR GENERAL, DEPARTMENT OF DEFENSE

Subj: AUDIT OF HOTLINE ALLEGATIONS REGARDING THE MILESTONE 111A PRODUCTION DECISION FOR THE AIRBORNE SELF-PROTECTION JAMMER (ASPJ) PROGRAM (PROJECT NO. 9AE-008)

Thank you for your 25 January memorandum. I share your concern for the impact of the Air Force's withdrawal upon the ASPJ program. We have thoroughly assessed your concerns, but have concluded that the best course of action for the government is to continue the present Lot 1 contracts.

The question of whether to continue two sources in light of the Air Force withdrawal is a valid issue which we have under consideration. However, the appropriate way to implement any determination not to maintain two sources would be through a competitive buyout of the program by one of the current producers at award of the next or subsequent lot. Since the Navy has requirements for more than 600 systems and Lot 1 is only the first 100 units, there is no danger that the Lot 1 Air Force units will go to waste. If the Air Force does not utilize them, we can do so and reduce the size of a future lot.

Issuance of a partial stop work order at this time would only save the government money if the Navy terminated the program. No such decision has been made, nor is it by any means compelled simply because of the Air Force withdrawal. The ASPJ program will be reviewed by the Defense Acquisition Board in the fourth quarter of this year. We believe the government's interests will be fully protected through that regular review, our lot-by-lot procurement strategy, and the limits to government liability clauses in our production contracts.

In the absence of a decision to terminate the program, issuance of partial stop work orders would cost money, and not save it. Currently the contractors are each spending approximately $750,000 a month in direct manhours and overhead. A 50% stop work order would cost a minimum of $750,000 a month, not including any increases in material cost, management cost or contractor/sub-vendor claims. A partial stop order would also result in reducing the quantities in existing purchase orders thereby increasing unit cost and would require our prime contractors to issue new purchase requests to their subcontractors when the stop work order was lifted. The processing time for new purchase orders would be expected to add about six months to the existing schedule. Moreover, a stop work order would invalidate the limits to government liability clauses in the Lot 1 contracts. This would eliminate one of the major risk reduction mechanisms instituted at the direction of the Defense Acquisition Board.

For these reasons, we believe the better course is to continue the existing contracts and resolve the question of whether to maintain two sources with respect to future production lots. Accordingly, I would ask that you reconsider your recommendation. My staff is available to assist your office in resolving any further concerns regarding our position.

H. Lawrence Garrett, III

ANALYSES OF THE SECRETARY OF THE NAVY'S REASONS FOR NOT ISSUING STOP-WORK ORDERS ON LOT 1 CONTRACTS

This Appendix describes the reasons that the Secretary of the Navy gave for disagreeing with our suggestion that the Navy determine whether it would be cost beneficial to partially stop work on the Lot 1 contracts and assess the effects of the Air Force's withdrawal for the ASPJ Program. This Appendix also provides the results of our assessment of the Secretary of the Navy's reasons.

Secretary of the Navy's Reasons. The Secretary provided the following reasons for not stopping work.

One Versus Two Contractors. The Secretary of the Navy acknowledged that our question of whether to proceed with two contractors to produce the ASPJ units was a valid issue in view of the Air Force's withdrawal from the program. However, the Secretary stated that the appropriate way to implement a decision not to maintain two contractors would be through competition, not on Lot 1 production units, but on the next and following production lots.

Transfer of Air Force Funded Units to the Navy. The Secretary of the Navy maintained that there is no danger that the Lot 1 Air Force units would go to waste because the Navy had requirements for more than 600 systems and Lot 1 was only for the first 100 units. The Secretary added that if the Air Force does not utilize its units, the Navy can do so and reduce the size of a future lot.

Need to Terminate Air Force Units From Contracts. The Secretary of the Navy concluded that the issuance of a partial stop-work order would only save the Government money if the Navy terminated the ASPJ program. The Secretary stated that no such decision had been made and that no such decision would be made solely on the basis of the Air Force's withdrawal from the program. The Secretary added that the Government's interest would be protected by a Defense Acquisition Board review (which is scheduled for the fourth quarter of 1990), by the ASPJ Program's lot-by-lot procurement strategy, and by the limits to liability clauses in the Lot 1 production contracts.

Cost Consequences in Using Stop-Work Orders. The Secretary of the Navy also concluded that in the absence of a decision to terminate the program, issuance of partial stop-work orders would cost money, not save it. The Secretary stated that each contractor is spending approximately $750,000 a month for direct labor worked and overhead, and a 50-percent stop-work order would cost a minimum of $750,000 a month, excluding any increases in material cost, management cost, or contractor and

ANALYSES OF THE SECRETARY OF THE NAVY'S REASONS FOR NOT ISSUING STOP-WORK ORDERS ON LOT 1 CONTRACTS (Continued)

sub-vendor claims. The Secretary also stated that a partial stop-work order would result in reducing the quantities in existing purchase orders, thereby increasing unit cost and would require prime contractors to issue new purchase requests to their subcontractors when the stop-work order was lifted. Further, he commented that the processing time for new purchase orders would be expected to add about 6 months to the existing schedule. The Secretary added that a stop-work order would invalidate the limits to Government liability clauses in the Lot 1 contracts, eliminating one of the major risk reduction mechanisms instituted at the direction of the Defense Acquisition Board.

Assessment of Secretary of the Navy's Conclusions. We disagreed with the Secretary of the Navy's reasons for concluding that it would not have been in the DoD's best interest to stop work and determine how best to act on the Air Force's withdrawal from the program. Our reasons follow.

One Versus Two Contractors. The Secretary of the Navy did not provide any cost data supporting the statement that it would not be appropriate to use one contractor rather than two contractors to complete the Lot 1 contracts. Cost data show that it would be appropriate to consider the use of one contractor. If the Air Force units were terminated from the contracts, the Navy will have to pay more than $248,000 or $330,000 per unit ($12.4 million or $16.5 million in total), for two contractors to produce the 50 units that will remain on the contracts. Under such a circumstance, we believe it would be prudent to consider the use of one contractor to avoid a price increase. Conversely, if the Air Force units are not terminated, it would also be prudent to consider the use of one contractor to produce all 100 units on the contracts. Cost data show that the DoD could reduce the unit price for the 100 units by more than $175,000 or $17.5 million, total, if one contractor made all 100 units.

Transfer the Air Force's Units to the Navy. Although the Secretary concluded that the Air Force's ASPJ units could be transferred to the Navy on delivery from the contractors, such a transfer would eliminate two cost saving options available to management. The first option was terminating the Air Force units thereby reducing DoD's cost risk on a yet to be proven ASPJ Program by $233.5 million (the amount of the Air Force funds on the contract less $1.0 million for estimated termination costs). The other option was the use of one contractor rather than two contractors to produce the ASPJ units, thereby avoiding increased unit prices.

ANALYSES OF THE SECRETARY OF THE NAVY'S REASONS FOR NOT ISSUING STOP-WORK ORDERS ON LOT 1 CONTRACTS (Continued)

Need to Terminate Air Force's Units From Contracts. The Secretary was correct in concluding that no termination is required as a result of the Air Force's withdrawal from the program. However, as discussed in the preceding subparagraph, management would forego opportunities to reduce the cost risks on the ASPJ Program by not terminating the Air Force's units from the Lot 1 contracts.

Cost Consequences in Using Stop-Work Orders. The Secretary was inaccurate in concluding that the stop-work orders would only cost money, not save money. The main reason the Secretary reached that inaccurate conclusion was that he considered only one side or part of the economic analyses necessary to determine whether stop-work orders would be cost beneficial. Specifically, the Secretary considered only the cost of stopping work. The Secretary did not consider the cost of other available options (terminate the Air Force units from the contracts or use one contractor rather than two contractors to produce 50 or 100 ASPJ units). Also, he did not compare the costs of the other options with the cost of stopping work to determine whether the options would be more cost beneficial. By considering only one part of the economic analyses, the Secretary could come to only one conclusion: stop-work orders cost money. However, if the Secretary had considered the other alternatives, he would have seen that stopping the work would have appeared attractive even after calculating what it would cost to stop work.

(The accuracy of cost data used by the Secretary to analyze our suggestion is addressed in the classified version of this report).

Also, the Secretary's statement on the effect of stop-work orders on the contractors' purchase orders was based on an erroneous premise. The Secretary understood that by using stop-work orders, the contractors would have to reduce the quantities on each purchase order to the level necessary to support only the Navy's 50 ASPJ units. That was not the intent of our suggestion. We suggested that the contractors halt the release of all their purchase orders until the Navy and Air Force decided the best course of action for the DoD.

In summary, the Secretary's assessment of the benefits of using a stop-work order was too limited and based on inaccurate information.

DEPARTMENT OF THE NAVY
NAVAL AIR SYSTEMS COMMAND
NAVAL AIR SYSTEMS COMMAND HEADQUARTERS
WASHINGTON DC 20361

13000 REFER TO
10031C/3511G
12 May 89

From: Commander, Naval Air Systems Command

Subj: MINUTES OF THE AIRBORNE SELF PROTECTION JAMMER ACQUISITION REVIEW BOARD OF 20 APRIL 1989

Encl: (1) List of Attendees

1. A Naval Air Systems Command (NAVAIR) Acquisition Review Board (ARB) chaired by VADM J. B. Wilkinson convened on 20 April 1989 to review the ACAT ID Airborne Self Protection Jammer (ASPJ) Program and to gain approval to go forward to a Navy Program Decision Meeting (NPDM) on 3 May 1989. The purpose of the NPDM is to seek approval for a milestone IIIA (approval for low rate initial production) decision. Enclosure (1) lists the ARB attendees.

2. Major points briefed to the Board by CAPT S. M. Small (PMA-272), the Program Manager, were as follows:

a. ASPJ is a joint service program with the U.S. Air Force which provides a common defensive electronic countermeasure system for tactical aircraft. ASPJ must defeat the projected threat, adapt to changing threats beyond the year 2000, and fit into existing aircraft space. The acquisition strategy called for the selection of three contractor teams during the concept phase, a down selection to two contractors for the demonstration/validation phase, and the final selection of a Joint Venture Team (ITT/Westinghouse) during full-scale development (FSD). The program is currently in the production verification (PV) phase during which 20 ASPJ systems will be tested, analyzed, and problems corrected. Lot I deliveries of 104 systems, split equally between the two contractors, are scheduled to begin in the fourth quarter of FY 1991. A total inventory of 2,283 systems is planned. Lots 2 through 9 will be competitively awarded.

b. Testing for the ASPJ included 8,000 hours in government laboratories and 500 hours of flight tests in the F-16A and the F/A-18A. CDR P. Metzger presented the results of the Commander, Operational Test and Evaluation Force (COMOPTEVFOR) critical operational issues testing (OT-IIC) in the F/A-18A. It was concluded that the ASPJ was marginally operationally effective and marginally operationally suitable; supporting approval for low rate initial production (ALRIP). LtCol M. Marsh from the Air Force Operational Test and Evaluation Center (AFOTEC) presented the results of the testing on the F-16A conducted at the Air Force Electronic Warfare Environment Simulator (AFEWES). He recommended that an initial operational test and evaluation be conducted on the operational effectiveness and operational suitability of the PV version of the ASPJ prior to making any final recommendation.

c. The program manager then presented the suitability and effectiveness corrective actions planned for reliability, built in test (BIT), and human

Subj: MINUTES OF THE AIRBORNE SELF PROTECTION JAMMER ACQUISITION REVIEW BOARD
OF 20 APRIL 1989

factors. Changes identified during FSD but not incorporated are to be corrected in the PV phase. PV testing will include electrical performance tests, environmental qualification tests, reliability growth tests, and BIT demonstration. The contractor will retrofit the improvements in future systems without increasing the price.

d. The Air Force did not budget for P^3I, wanting to have an analysis conducted to confirm whether it is the most cost effective and beneficial approach before committing funds. Outyear production funding issues will be addressed in POM 92/93. Spares funding was zeroed out in FY 1989 even though Congress appropriated $22.6 million for ASPJ. The Air Force was requested to resolve this issue. The Navy APN-1 shortfalls in FY 1992-1994 will be worked as a POM 92 issue. The APN-6 shortfalls in FY 1989 and 1990 will be resolved by work arounds (i.e. delay the installation of 13 Lot I systems until the organic intermediate level of maintenance is established in 2 to 3 years, and at the same time the Type Commanders will intensely manage the non-install systems and use them to augment a rotatable pool).

e. All documentation is on track for approval at the milestone IIIA NPDM. All risks are assessed to be "green" except for financial, reliability, and logistic support which are considered to be in a "yellow" status. The Air Force supports ASPJ for two wings and wants a risk reduction program for P^3I similar to that for the system currently in PV. The program manager recommended that ASPJ be approved to go forward to the NPDM seeking an ALRIP decision for Lot I.

3. At the conclusion of the briefing, the Board denied approval to go forward to the NPDM based on the lack of a clear supportive recommendation from COMOPTEVFOR and AFOTEC and directed the following:

a. PMA-272 - Provide the operational testers with a detailed plan for correcting the system during the PV phase. Obtain comments from the testing activities that the plan is a reasonable one in order to make a better assessment on the recommendations.

b. COMOPTEVFOR/AFOTEC - It was recommended that, prior to the next review, the operational testing briefs be streamlined by simplifying the technical data discussion, summarizing the results, and making clear recommendations. It was also recommended that the positive test results be stressed.

c. PMA-272 - Structure a two phase P^3I study effort looking into 1) risk reduction areas, and 2) electronic warfare as a whole.

d. PMA 272 - Coordinate the resolution of the Air Force spares issue.

e. PMA-272 - Reach an Air Force/Navy consensus on the ASPJ program and brief VADM J. B. Wilkinson again to gain approval to proceed to the NPDM.

J. B. WILKINSON

POTENTIAL MONETARY AND OTHER BENEFITS RESULTING FROM AUDIT

Recommendation Reference	Description of Benefits	Amount and/or Type of Benefit
A.1., A.2.	Performance. Adequate time and priority of the program will allow completion of operational test and evaluaction before making further production decisions.	Cost avoidance associated with avoiding potential retrofit costs. Until such time that operational testing has been completed, retrofit cost avoidance cannot be estimated.
B.1.	Program. Independence of operational testers will assist in providing adequate information to the decisionmakers.	Nonmonetary.
B.2.	Program. Coordination by the C3I Systems Committee with the testers will assist in providing adequate information to decisionmakers.	Nonmonetary.
C.1., C.2.	Financial. Coordinated and conscious effort by all cognizant parties will resolve cost estimating differences and achieve a reasonable cost estimate..	Nonmonetary.

ACTIVITIES VISITED OR CONTACTED

Office of the Secretary of Defense

Office of the Under Secretary of Defense for Acquisition, Washington, DC
Office of the Assistant Secretary of Defense (Program Analysis and Evaluation), Washington, DC
Office of the Assistant Secretary of Defense (Production and Logistics), Washington, DC
Office of the Assistant Secretary of Defense (Command, Control, Communications and Intelligence), Washington, DC
Office of the Director for Operational Test and Evaluation, Washington, DC
Office of the Director (Program Integration), Washington, DC

Department of Navy

- Office of the Assistant Secretary of the Navy for Research, Engineering and Systems, Washington, DC
- Office of Naval Inspector General, Washington, DC
- Headquarters, Naval Air Systems Command, Arlington, VA
  - Office of the Naval Air Systems Command Inspector General, Arlington, VA
  - Airborne Self-Protection Jammer Program Office, Arlington, VA
  - AV-8B Program Office, Arlington, VA
  - F-14 Program Office, Arlington, VA
  - F/A-18 Program Office, Arlington, VA
- Headquarters, Operational Test and Evaluation Force, Norfolk, VA
- Naval Technical Intelligence Center, Suitland, MD

Department of the Air Force

- Office of the Assistant Secretary of the Air Force (Acquisition), Washington, DC
- Headquarters, Air Force Systems Command, Andrews Air Force Base, MD
  - Aeronautical Systems Division, Wright-Patterson Air Force Base, OH
  - Foreign Technology Division, Wright-Patterson Air Force Base, OH
- Air Force Operational Test and Evaluation Center, Kirtland Air Force Base, NM and Eglin Air Force Base, FL
- Headquarters, Tactical Air Command, Langley Air Force Base, VA
- Air Force Plant Representative Office, Westinghouse Electronic Systems Group, Baltimore, MD

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Defense Agencies

Defense Intelligence Agency, Washington, DC
Defense Technical Information Center, Alexandria, VA
Defense Contract Administration Services Plant Representative Office, ITT Avionics Division, Nutley, NJ
Defense Contract Audit Agency Offices:
  ITT Avionics Division, Nutley, NJ
  Westinghouse Electronic Systems Group, Baltimore, MD

Non-DoD Activities

Senate Committee on Governmental Affairs, Washington, DC
House Appropriations Committee, Subcommittee on Defense, Washington, DC

Non-Government Activities

ITT Avionics Division, Nutley, NJ
Westinghouse Electronic Systems Group, Baltimore, MD
General Electric Aerospace Division, Utica, NJ
Filcom Microwave, Incorporated, Chelmsford, MA
Raytheon Company, Northborough, MA
Anaren Microwave, Incorporated, E. Syracuse, NY
Lockheed Sanders, Incorporated, Manchester, NH
Rockwell International, Anaheim, CA
Robinson Laboratories, Incorporated, Nashua, NH
Polyphase, Ft. Washington, PA
M/A Com, Incorporated, Burlington, MA
Omega Microwave, San Jose, CA
Remec Engineering Components, San Diego, CA
Teledyne Tec, Westport, CT
Litton Electronic Devices Division, San Carlos, CA
Varian TWT Division, Palo Alto, CA
Radian Technologies, Santa Clara, CA
The Association of Old Crows, Washington, DC
The Journal of Defense Electronic Warfare, Washington, DC

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- Senate Committee on Armed Services
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- Senate Ranking Minority Member, Committee on Armed Services
- Senate Subcommittee on Oversight of Government Management, Committee on Governmental Affairs
- Senate Committee on the Budget
- House Committee on Appropriations
- House Subcommittee on Defense, Committee on Appropriations
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U.S. General Accounting Office